

Air Conditioning & Refrigeration News

The Newspaper of the Industry

Trade Mark Registered U. S. Patent Office.
Member Audit Bureau of Circulations. Member Associated Business Papers.

Written to Be Read on Arrival

VOL. 30, NO. 1, SERIAL NO. 580
ESTABLISHED 1926Entered as second-class
matter Aug. 1, 1927

DETROIT, MICHIGAN, MAY 1, 1940

Copyright, 1940, by
Business News Pub. Co.ISSUED EVERY WEDNESDAY
\$4.00 PER YEAR

Rema To Meet On May 23-24; Show Dates Set

**Big Show Is Jan. 13-16, 1941;
Parts, Equipment Firms
To Draw For Spaces**

CHICAGO—The 1940 annual meeting of the Refrigeration Equipment Manufacturers Association will be held in the Edgewater Beach hotel, Chicago, Thursday and Friday, May 23-24.

These dates were set by the association's Executive Committee—consisting of J. S. Forbes of Superior Valve & Fittings Co., H. V. Higley of Ansul Chemical Co., and E. A. Vallee of Automatic Products Co.—at a session held in Chicago last Thursday for the purpose of making arrangements for this meeting and also for approving plans for the Third All-Industry Refrigeration & Air Conditioning Exhibition—for which the dates of Jan. 13-16, 1941, also were set.

Like other All-Industry shows, it will be held in the Stevens hotel, Chicago.

M. W. Knight, general sales manager, Peerless of America, Inc., who served with success as chairman of the Exhibition Committee for the 1939 and 1940 shows, will again

(Concluded on Page 3, Column 1)

Kessler Directs Sale Of Tuthill Freezers

CHICAGO—H. T. Kessler has joined Tuthill Pump Co. as vice president in charge of the freezer sales division.

Prior to joining the Tuthill organization, Mr. Kessler was national sales manager for the electric refrigeration and air conditioning division of Servel, Inc. For the past 13 years, he has been identified with the mechanical refrigeration industry.

Mr. Kessler is now directing the introduction of Tuthill's new automatic Freezette, a 1-gallon, self-contained, portable freezer for frosted malteds and ice cream in private showings to commercial distributors in major trading areas of the country.

3-Month Range Sales Up 27% To 109,036 Units

NEW YORK CITY—March shipments of domestic electric ranges totaled 39,643 units, a gain of 31.4% over shipments for March, 1939, according to figures made public by National Electrical Manufacturers Association.

Sales for the first three months of the year reached 109,036 units, a 27.8% increase over first quarter shipments last year.

This report covers sales to dealers and distributors in the United States and its territories. This year's figures are based on reports of 19 manufacturers; only 17 companies reported in 1939.

George A. Rempe Resigns As Coil Company Head

CHICAGO—George A. Rempe has resigned as president of Rempe Co., manufacturer of pipe coils and bends, fin coils, and unit coolers. He had been associated with the company for 29 years, the last 18 years of which he was president. No announcement has been made regarding his future plans.

'Fortune' Doesn't Pry Many Startling Facts From Smart Refrigeration Men

By George F. Taubeneck

DETROIT — Fortune magazine's much-feared "expose" of the household refrigerator business didn't turn out to be so startling, after all. For the last two months rumors have been floating around the industry that Fortune would "tell all" in the May issue, that sources of inside information had been tapped, and that the rattling of the skeletons in the closet would be exceeded only by the rattling of executives' knees as they quaked in their boots.

Under the title, "Refrigerator Price War" in the index, and "The Nudes Have It" on the first page of the article, the Fortune story contains little that readers of the NEWS haven't read already—except for a "standing of the clubs" set of sales statistics by manufacturers, which is reprinted on page 2 of the NEWS.

Behind the scenes of the production of this article is an interesting tale, a story of how the Fortune editors ran into a group of industry executives who turned out to be bright boys, themselves.

The Fortune method of obtaining an inside picture of an industry, judging by the way they went about getting this one, apparently consists of one part research, one part keen cross-examination, and one part industry cooperation.

After deciding upon the industry or company to be investigated, thoroughgoing research workers get together a comprehensive file of all the published information on that

subject. This is digested, and presented to trained reporters.

These reporters study the file carefully, and figure out a series of bright questions to ask, questions which are sometimes startlingly forthright, sometimes indirect and "oblique."

After many people have been thus interviewed, the reporters put two and two together, arrive at 22, and prepare a "rough draft." This "rough draft" is then mailed out to those interviewed. They are usually so interested, surprised, and possibly appalled that they come through with the missing links in the story in order to "get the record straight."

In the case of Fortune's "Refrigerator Price War" story this formula was followed right down through a month of intensive investigation. But when the refrigeration industry's "brass hats" were confronted with the "rough draft," they weren't beguiled into letting down their hair and revealing all their cost figures. Those that did appear in the article are partly conjecture, according to executives we have questioned on the subject. Several executives, however, were sufficiently concerned about the article to make trips down to New York to beard the Fortune lions in their den.

The writer first met Fortune's Mr. Burck in Dayton where, after each of us had done our own interviewing at Frigidaire, we had dinner

(Concluded on Page 2, Column 1)

Fleming Leaves Nema To Join Chromalox

NEW YORK CITY—Bruce A. Fleming, for the past six years an executive secretary of the National Electrical Manufacturers Association, has resigned to become assistant to the president of Edwin L. Wiegand Co., Pittsburgh, manufacturer of Chromalox heating units for electric ranges and industrial uses.

While with Nema, Mr. Fleming directed the recent national promotional campaigns on electric refrigerators, ranges, and water heaters, and was active in executive affairs of the Modern Kitchen Bureau and the Commercial Electric Cooking Council.

Eugene Vinet, an electrical engineer who for the past 10 years has been associated with Edison General Electric Appliance Co., Chicago, takes over Mr. Fleming's Nema work.

Court Says Municipal Utility May Retail

LINCOLN, Neb. — A municipal corporation in the state, which is given authority to operate a business enterprise, may conduct its business with as much freedom as a similar private corporation, the Nebraska Supreme Court ruled, in sustaining the right of the Omaha Metropolitan Utilities District to sell refrigerators and other appliances in competition with dealers.

The decision affirmed a Douglas county (Omaha) court ruling in a case brought against the utilities district by Nelson, Johnston, & Doudna, Omaha appliance firm. The appliance firm claimed that the right to manufacture and distribute gas did not imply the right to maintain a retail appliance store.

The state court's ruling supported the contention of the utilities district and 13 other municipalities and three public power districts, acting as friends of the court, that the sale of appliances was "vital" to its success or failure.

The sale and distribution of appli-

(Concluded on Page 4, Column 2)

Unit Air Conditioner Data

Special feature of this issue is product information and sales data on self-contained air conditioners.

On pages 6 through 11 will be found descriptions and pictures of 1940 unit air conditioner models.

Pages 17 through 23 give detailed air conditioner sales data for 1939 for a number of major cities, telling who sold what where. Also on these pages as well as pages 4 and 5 are published articles about sales tactics on unit air conditioner equipment.

Columbus 'Good Housekeeping' Shop Builds Unit Conditioner Sales By Advertising Plan

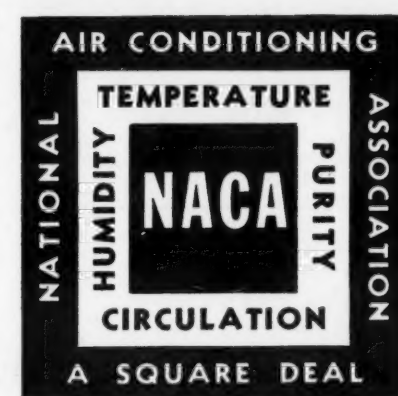
COLUMBUS, Ohio — The Good Housekeeping Shop, a home appliance sales organization, is going after the unit air conditioning business here with a specialized sales staff and a long-range advertising campaign — laying a firm foundation for the day when the conditioner will be a standard "appliance."

The company holds the Central Ohio distributing franchise for York self-contained units and Freon models. Air conditioning, commercial refrigeration, beverage coolers, and stokers are set up as a separate department from household appliances. Department staff consists of the manager, an engineer, three installation and service men, and 10 salesmen. Stress is placed on year around air conditioning, with efforts concentrated on the unit type.

The success Good Housekeeping is having with air conditioning and its heavy play on package units is indicated by the report that currently York claims to account for 60% of the tonnage in Columbus, despite strong competition from a score of major dealers.

Since securing its franchise, the shop has participated in two York contests, which include a five-state factory division. Many of the cities in this area are larger than Colum-

Proposed Emblem



The above design, created by Albert L. Maillard, has been submitted to the directors of the National Air Conditioning Association, organized in Chicago last January during the Second All-Industry Refrigeration & Air Conditioning Exhibition.

Dealer Association of Air Conditioning Men Drives For Members

KANSAS CITY, Mo.—Headquarters of the National Air Conditioning Association has been established at 1603 Power & Light Building at 106 West 14th St. here, according to Jesse W. Page, Jr. of Page-Williamson, Inc., Charlotte, North Carolina, president of the organization. Mr. Page reports that Albert L. Maillard, executive secretary, is now working on the affairs of the association and is anxious to receive applications for membership from distributors, dealers, contractors, manufacturers, and their representatives.

To support Mr. Maillard, in his drive for membership, the board of directors of the association are conducting local drives to secure members in the districts where they are located. Individuals, firms, and local associations interested in becoming associated with the National Air Conditioning Association are urged by Mr. Page to communicate with the nearest director of national headquarters.

The directors of the association are located at the following points: Jesse W. Page, Jr., president, Page-Williamson, Inc., Charlotte, N. C.; John M. Sprekelmeyer, vice president,

(Concluded on Page 4, Column 1)

York Tops All '39 Advertisers Of Conditioners

**General Electric, Carrier
Are Close Behind In
Magazine Spending**

DETROIT—York Ice Machinery Corp., spending \$44,375, led other manufacturers in expenditures for national magazine advertising on air conditioning in 1939, according to a survey of such advertising recently compiled.

Close behind York were General Electric Co., with total expenditures of \$43,763, and Carrier Corp., which spent \$41,774 in national magazines.

Frigidaire put \$20,890 into magazine advertising for air conditioners last year, Philco spent \$14,395 to tell magazine readers about its room coolers, and Westinghouse spent \$8,750 on its Unitaire.

Two advertisers of parts and accessories for air conditioning equipment spent sizeable amounts in national magazine advertising last year—Minneapolis-Honeywell spending \$45,010 to advertise its controls, and Owens-Corning Fiberglas Corp. put out \$42,250 to promote the sale of its Dust-Stop air filters.

Rift Grows Wider Between Dealers And N. Y. Utility

NEW YORK CITY — The rift between certain groups of metropolitan appliance dealers and Consolidated Edison Co. over the utility's "bargain package" sales promotional activities widened perceptibly last week when the power company removed Sol S. Scholder, Brooklyn appliance dealer who is president of the Electrical Appliance Dealers Association of Brooklyn, from its list of "cooperating dealers" in the current package promotion, and the Brooklyn association countered with charges of discrimination and "retaliation."

In dropping Mr. Scholder and his firm, Edisco Appliances, Inc., from its cooperating dealer list, the utility charged him with failure to properly cooperate and with "endeavoring to promote a spirit of unrest, discontent, and lack of cooperation among other dealers."

The Edison company left the way open for the Edisco firm's reinstatement, however, by explaining that it would approve application for such action upon presentation of evidence of "compliance or intention of compliance with the principles and rules and regulations governing

(Concluded on Page 4, Column 2)

Georgia 3-Months Sales Nearly Double '39 Mark

ATLANTA—Refrigerator sales in Georgia Power territory during the first three months of this year almost doubled those of the same period of 1939, and sales of space heaters more than doubled their last year's figures. All other appliances, except vacuum cleaners, were well ahead of comparable 1939 totals.

Following are comparative 1940 and 1939 sales for the first quarter:

	3 Months 1940	3 Months 1939
Refrigerators	910	455
Ranges	663	453
Water Heaters	481	317
Washers	256	137
Ironers	34	22
Cleaners	201	215
Space Heaters	935	404

(Concluded on Page 4, Column 4)

Fortune Magazine Seeks Explanation Of 1940 Refrigerator 'Price War'

(Concluded from Page 1, Column 3)
together. Later he went to Mansfield, Chicago, and Detroit, where we met again. In the meantime, Fortune's impressionable Miss Fritsch had interviewed Herman Price at Sears, Roebuck, after which she saw Mr. Cockrell at the NEWS home office, and then went back East to continue her research.

Mr. Burck is a capable reporter, and he had dug up a great deal of interesting information. Much of this information did not appear in

the published version. From somewhere he had pieced together a set of sales figures for each manufacturer, which he checked with us. Some of these figures we thought a trifle high; but in the main, they seemed to be reasonably close to the facts as we understood them.

These figures are the most interesting feature of the article, with the possible exception of the grand snapshots of "Sam" Vining of Westinghouse in action. The figures are as follows:

Sales By Manufacturers By Fortune Magazine

U. S. HOUSEHOLD REFRIGERATOR SALES (EST.)

	1937 Units	%	1938 Units	%	1939 Units	%
Frigidaire	504,000	21.8	259,000	20.6	340,000	17.7
Montgomery Ward (unit by Frigidaire) ..	80,000	3.5	60,000	4.7	105,000	5.5
General Electric	375,000	16.2	193,000	15.3	330,000	17.1
Hotpoint (made by G-E) ..	52,000	2.2	37,000	2.9	62,000	3.2
Coldspot	258,000	11.2	205,000	16.2	285,000	14.8
Westinghouse	250,000	10.8	93,000	7.4	194,000	10.1
Kelvinator-Leonard	247,000	10.7	96,000	7.6	139,000	7.2
Norge	199,000	8.6	92,000	7.3	108,000	5.6
Crosley	84,000	3.7	49,000	3.9	77,000	4.0
Others	187,000	8.1	85,000	6.7	179,000	9.3
Nonmembers of Nema (National Electrical Manufacturers Assn.) ..	74,000	3.2	94,000	7.4	106,000	5.5
Total domestic sales....	2,310,000		1,263,000		1,925,000	
Exports of Nema.....	191,000		167,000		160,000	
Total world sales by all U. S. manufacturers..	2,501,000		1,430,000		2,085,000	

Other interesting excerpts:

"Early in 1939 Kelvinator appropriately came to the grim conclusion that the industry was sitting on a volcano. More and more business was going to mail-order houses and private brands. Distributors were complaining about losses, and dealers were cutting prices. To Kelvinator-Leonard, losing position steadily, only a completely radical move could turn the tide. This move entailed not merely large price reductions, but a carefully planned engineering and manufacturing program that included an overhaul of the distribution system. Apparently imitating the Sears, Roebuck principle, Kelvinator set its new price structure on the foundation of reduced manufacturing-distribution costs. These it achieved by altering or annihilating the conventional system wherever possible. It scheduled a higher than normal concentration of its capacity on the 6 and 8-footers, which somewhat reduced construction costs.

"In brief, Kelvinator sold through 135 distributors in 1939, and these supplied 4,300 dealers. Today it has 65 distributors, 13 factory branches, and 29 warehouses, all of which supply about 3,800 dealers. But several hundred of these dealers, accounting for about 60% of sales, buy directly from Kelvinator's branches. Instead of the 36 or 37% of list they got in 1939, they now get 40 to 43%, or practically enough to compensate them for the reduction in price. Assuming the anticipated volume increase, they are thus probably ahead of 1939 and certainly ahead of dealers with a competing line."

"The primary cause of the trouble, manifestly, is the attack on the conventional distribution system. But so long as the attack on the distribution system is successful, the manufacturers who use the system will have to employ the loss-leader principle; and so long as they employ it, Sears,

Roebuck and the other mail-order houses and chain stores can do likewise. Which leaves things where they are.

"The lack of a clear way out of this forest of dilemmas is reflected in the actions and statements of the standard companies themselves. Kelvinator believes it has found a straight path, however unexplored it may be. The rest are hatching ingenious plans for keeping sales of the low-priced nudes down to a reasonable figure next year, and are hoping that the first wave of enthusiasm for the nudes will break presently, and the average unit price will not drop too low. Frigidaire, taking an almost carnal delight in producing 2,900 boxes a day during the rush season, professes not to be bothered unduly by the fact that 50% of its output is composed of the low-priced models. But even it believes the average unit price of Frigidaires in 1940 will not drop much below \$150; it too is planning to trade up to the best of its ability next year. And most of the manufacturers are balm themselves with the news that Coldspot has been at least temporarily repulsed, and that the marginal 'cat-and-dog' producers will hardly be able to stand the gaff. A few refrigerator men see no way out but a 'return to normalcy,' that is, to higher prices. Finally, there is talk about replacements, which are beginning to bulk large. They have been estimated at more than 300,000 in 1939, more than 500,000 in 1940, and about 800,000 by 1942. The idea is that replacement prospects, who have been putting up with picturesque old nude refrigerators, will be satisfied with nothing but the most refined and accessoried models and can be counted on to turn up their noses at the loss leaders. Plainly, however, replacements cannot be counted on to save the situation. If anything, they complicate it still further by contributing to a used refrigerator market that already is becoming a neat problem in itself.

"As for the distribution system, it seems to be in a kind of travail. The very function of the distributor is tending to atrophy. Practically all boxes will soon be equipped with sealed compressor units, just as nearly all the compressor units now come with a five-year factory guarantee (for which \$5 is put aside in reserves). So as a service station and parts warehouse, the distributor is becoming steadily less necessary. Independent parts jobbers and service men have been taking over some of this business anyway. The larger dealers, who number about 1,200 and who sell most of the nation's refrigerators, are howling for a greater percentage of list than they now get if they are going to begin to compete with Coldspot."

'Appliance of Month' Drive Started In Pittsburgh

PITTSBURGH — A cooperative spring electrical appliance campaign featuring an "appliance of the month" and featuring electric roasters as a traffic builder was launched by Duquesne Light Co. at a dinner meeting attended by 500 representatives of the industry in this district.

The campaign will use extensive newspaper advertising, customer broadsides, window and counter cards, theater displays, and newspaper and radio advertising to bring patrons in 10 trading areas into dealers' stores to buy not only "impulse" items but larger appliances as well.

Ten traffic builders, featuring the "appliance of the month," will advertise I.E.S. lamps, toasters, mixers, irons, lamps, waffle makers, corn poppers, clocks, and light conditioning appliances from April through December. Special appliance to be featured during the month will be announced as the campaign progresses.

Radio "spot" announcements will be carried on Pittsburgh's three major stations each evening and on Sundays, with a special Sunday organ recital as an added feature. Street car cards will be used to call attention to the month's featured appliance, as well as the roaster.

Annual cooking school in 26 neighborhood theaters is expected to attract 75,000 persons, and illuminated signboards will be used from April through July. At least two large newspaper advertisements will appear monthly.

Basis of the campaign is a recent survey which indicates that Pittsburgh women intend to buy one or more of the following appliances, in the order named: mixer, lamp, iron, toaster, clock, waffle baker, and percolator. Twice as many women wanted a mixer before an iron or toaster, and twice as many wanted a toaster before a clock or waffle baker.

1939 Air Conditioning Advertising Figures

AMERICAN RADIATOR CO.

Division of American Radiator & Standard Sanitary Corp.
(Heating and Air Conditioning)
Life \$ 1,525
Time 1,095
Newsweek 410
Total \$ 3,030

CARRIER

Carrier
(Air Conditioning)
Time \$11,085
Business Week 4,190
Saturday Evening Post 2,000
Total \$17,375

(Room Air Conditioners)

Time \$12,555
Saturday Evening Post 6,000
Business Week 3,680
Total \$22,235

(Room Ventilator)

Time 910
Business Week 350
The New Yorker 109
Total \$ 1,369

(Self-Contained Air Conditioners)

Business Week \$ 915
Total \$ 915
Grand Total \$41,774

FRIGIDAIRE

Frigidaire Air Conditioning Div.,
General Motors Sales Corp.
(Air Conditioners)

Time \$10,540
Newsweek 5,450
Business Week 4,900
Total \$20,890

GENERAL ELECTRIC

(Air Conditioning)
Time \$ 9,663
Fortune 2,800
Total \$12,463

(Air Conditioning and Heating Systems)

Better Homes & Gardens \$11,700
American Magazine 10,000
The American Home 9,600
Total \$31,300
Grand Total \$43,763

HOLLAND

(Automatic Furnace Air Conditioner)
Time \$ 5,250
Total \$ 5,250

MUELLER MILWAUKEE

J. L. Mueller Furnace Co.
(Heating and Air Conditioning)
Better Homes & Gardens \$11,700
The American Home 10,500
Total \$22,200

PHILCO

(York Cool-Wave Air Conditioners)
Saturday Evening Post \$12,000
Time 1,750
Business Week 645
Total \$14,395

WESTINGHOUSE

Westinghouse Electric & Mfg. Co.
(Unitaire)
Time \$ 8,750
Total \$ 8,750

YORK

York Ice Machinery Corp.
(Air Conditioning)
Saturday Evening Post \$32,000
Time 7,425
Total \$39,425
(Yorkaire Conditioners)
Time \$ 4,950
Total \$ 4,950
Grand Total \$44,375

Anaconda Copper Refrigeration Tubes

Unusually long lengths!



THE AMERICAN BRASS CO.
FRENCH SMALL TUBE BRANCH
General Offices: Waterbury, Conn.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★



Mills Condensing Units
By Mills Novelty Company
4100 Fullerton Ave., Chicago, Ill.

★ ★ ★ ★ ★ ★ ★ ★ ★ ★

It's Easier to Sell the Market for PACKAGED AIR CONDITIONING with the Complete CURTIS Line 5 sizes - 3 to 15 tons

Packaged air conditioning has opened up a great and ever-growing market for comfort cooling equipment—and you can easily and profitably meet this demand with Curtis Units.

Curtis offers a complete range of five sizes from 3 to 15 tons capacity. The low cost of this equipment, its ease of installation without disturbing normal business operations and its dependable performance exactly meets the requirements of offices and all classes of retail establishments.

The public is demanding comfort cooling and competition is forcing merchants to purchase it in order to continue in business at a profit. The Curtis line offers these advantages:

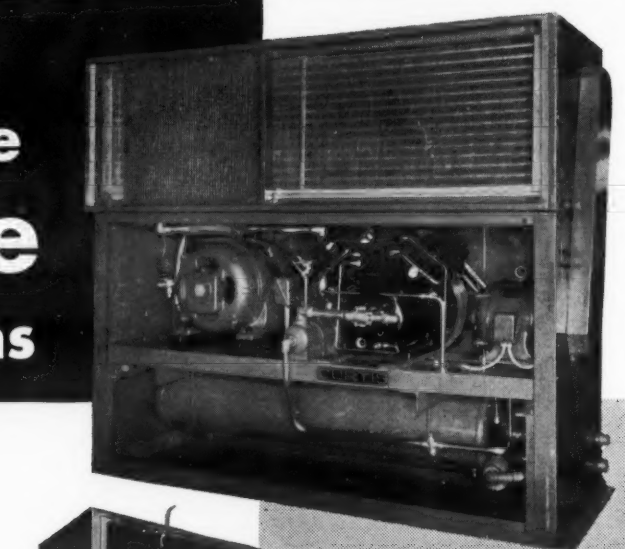
- Can be sold and installed in one day
- Semi-portable, easily moved if desired
- Units cool, circulate, dehumidify and filter the air
- Attractive appearance that blends with store fixtures
- Adaptable for heating
- Readily financed
- Correctly balanced—factory engineered and assembled
- Maximum efficiency—quiet, economical operation.

Here is an opportunity to get your share of the sales and profits from the packaged air conditioning market. For full information, write to Curtis today.



Curtis Refrigerating Machine Company

Division of Curtis Manufacturing Co. • Established 1854
1912 Kienlen Ave. St. Louis, Mo.

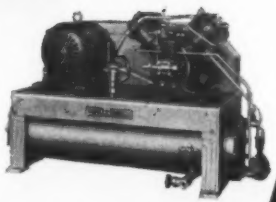


Above—7½, 10, 15 ton Remote or Central Type Air Conditioner.

At left—3 and 5 ton Packaged Type Air Conditioner.

Commercial Refrigeration

Curtis condensing units offer a combination of unusual service and performance features, including Timken Bearings, Centro-Ring oiling, drop-forged crankshafts and extra capacity. There are 47 air-cooled models from 1/6 to 5 H. P. and 45 water cooled models from 1/3 to 30 H. P.—all models available for either Freon or Methyl Chloride—Curtis engineered throughout.



Rema Sets Date For 1941 Industry Show

(Concluded from Page 1, Column 1)
serve as chairman for the 1941 All-Industry Exhibition.

Two full days will be devoted to the coming Rema annual meeting, the end of this month, beginning with a board of directors breakfast meeting on the morning of May 23, to be followed by a joint meeting of the Jobbers Relations Committee of Rema and the Manufacturers Relations Committee of NRSJA, in which the panel form of discussion, which proved so successful at the 1939 fall meeting of Rema, will be followed. Under this arrangement interested members of the association will be privileged to listen to the deliberations of these two committees.

A membership luncheon will be held at noon. In the afternoon session a formal program of addresses and papers will be presented with ample opportunity for a discussion of each of them. Also scheduled for the late afternoon is a conference between the Manufacturers Relations Committee of the Refrigeration Service Engineers Society and the Executive Committee of Rema.

The day's activities will be concluded with a formal banquet in the evening. For this affair especially, as well as for other activities which are being worked out for the ladies, all members are being urged this year to bring their wives.

The Friday forenoon session will be opened with a formal address by a speaker yet unnamed, after which three committee reports will be presented for discussion. During the early afternoon the formal business session, including the election of directors, will be held. The nominating committee consists of H. V. Higley, chairman; A. B. Schellenberg, Alco Valve Co.; and F. L. Riffin, Jr., Mueller Brass Co.

Following the business session scheduled to be concluded by 3:00 p.m., the drawing for spaces in the 1941 Exhibition will take place. All exhibitors present, beginning first with those who are members of Rema, will draw by lots for choices and will make their selections as their names come up.

The same rental schedule which prevailed at this year's show will be followed next January, that is, \$1.25 per square foot.

In view of the requests for space already made, it is believed that the show next year will require considerably more space than is available in the Stevens exhibition hall—filled to capacity at the show this last January. An additional large block of space on the mezzanine floor, therefore, has been taken and is being plotted to accommodate the overflow from the Exhibition Hall.

Oakland Appliance Assn. To Police Trade-Ins

OAKLAND, Calif. — Appliance Dealers Protective Association has changed its name to "Appliance Dealers Trade Association," and is expanding its field to enforce local trade policies in refrigeration, washers, and ironers.

Guy W. Wolf will manage the association, and Harry O. Welch will be the field representative. The new group has announced that its first job will be the adoption of a trade-in schedule on refrigerators, which will be policed in the same manner as the stove schedule, on which the association enjoyed considerable success in the past two years.

The bulletin announcing the formation of the association says, "we expect also to attack such evils in our business as buying club activities, illegal and discriminatory discounts, unethical and unfair advertising of credit terms, combination packages, and unethical and unfair advertising of used appliances."

E. C. Coolidge is the president of the new association; Max Wolf is vice president; and J. C. Strohmaier is treasurer. Members of the board of directors are Deon B. Barker, Julian Carash, Warren Chaffee, Gordon Hauschildt, Stanley Joseph, Roy Johnson, Sig Lion, Jack Palmer, John Ragghianti, Ernest Staats, and Mike Vukelich.

Leaves Rempe Co.



GEORGE A. REMPE

Refrigerator Taxes Total \$933,517 In March

WASHINGTON, D. C.—Excise tax collections on mechanical refrigerators during March totaled \$933,517.15, compared with \$954,436.34 in the same month last year, according to internal revenue statistics.

138 Conditioner Units Sold By N.Y. Dealers In 1st 1940 Quarter

NEW YORK CITY—Contracts for 161 air conditioning systems with a total of 7,585.67 connected horsepower were reported by distributors and dealers to Consolidated Edison Co. during the first three months of this year.

Included in the contracts were 138 unit conditioners, having a combined horsepower rating of 302.54. Of this number, 88 were of 1½ hp. capacity or less, and 50 were of 2 hp. size or larger.

Of first quarter installations, 121 were made in Manhattan, 21 in Brooklyn, 12 in Queens, and seven in the Bronx.

Following is a tabulation of first quarter cooling installations by types:

Residential	16
Bank	1
Barber Shops	2

Hospital Laboratories	2
Hotel Guest Rooms	2
Hotel Public Room	1
Office Buildings	3
Doctors' Offices	5
Private Offices	23
Funeral Parlors	2
Public Building	1
Restaurants	30
Showrooms	15
Department Stores	4
Retail Stores	22
Theaters	8
Miscellaneous	13
World's Fair	1
Candy Manufacturers	2
Candy Mfg.	2
Fur Storage	5
Meat Packer	1
Breweries	2
Total	161

N. Pacific To Cool Only Two Coaches This Year

ST. PAUL — Walter Gleb, coach foreman for the Northern Pacific Railway, in charge of air conditioning installations, reports that the company plans to condition two private cars this year, as compared with 38 coaches during 1939.

8-Plant Locker Chain Planned In Florida

ORLANDO, Fla.—Construction is scheduled to commence shortly on a \$32,000, 550-locker cold storage plant to be erected on the Orlando-Winter Park highway, midway between those two cities, by M. E. Crawford, Georgia food magnate. It is to be known as "Dixie Frozen Foods, Inc.," and is the first of eight such plants which Mr. Crawford plans to establish in Florida.

Complete and modern in every detail, both as to exterior and interior design, this plant will have the customary facilities—lobby, receiving room, processing room, chill room, curing room, aging room, quick-freeze room, and locker room—and will offer all the usual services.

Lockers will be available in various sizes and in groups of units. They will be rented at about \$15 per year per locker.

In addition to the regular butchers and processors, there will be a hostess in charge of the plant.

LOOK! HERE'S ANOTHER KINETIC AD IN "TIME"!

THOSE ADS SURE ARE DOING A JOB. AND THE WHOLE INDUSTRY BENEFITS TOO.



DESPITE the steady expansion of air conditioning, we have only begun to tap the potential market. Kinetic Chemicals therefore feel that there is a great opportunity for increased business to be obtained by promoting to a broad public an understanding of the value of air conditioning.

This campaign in TIME magazine is intended as still another expression of our aim to widen the field and further the interests of air conditioning in general. The readers of these advertisements are your direct prospects.

We believe that "Freon" refrigerants have contributed definitely to the advance of air conditioning. Since "Freon" refrigerants are inert with respect to metals used in refrigeration, the manufacturer has a wide selection of materials and metals for efficient design. These refrigerants permit simple construction, great flexibility of application, high operating efficiency, quietness of operation and low initial cost. And, above all else, "Freon" refrigerants are *safe*!

So many and so obvious are the advantages of "Freon" refrigerants that they have come to be used almost exclusively for air conditioning, in most of the household refrigerating units now being built, and in a majority of new commercial units. They are as adaptable to small fractional horsepower units as to commercial apparatus up to hundreds of tons capacity. Some of the largest refrigerating systems in the

world use "Freon" refrigerants . . . the Capitol Hill group of buildings in Washington, totaling 4,800 tons; the Department of Justice installation, 1,980 tons; and a gold mine installation in South Africa, of 2,000 tons capacity.

"Freon" refrigerants meet all the specifications for safety set by the Underwriters' Laboratories of Chicago. By following the specifications set, you avoid any possibility of penalty to your client in insurance rates, and promote safety of life and property.



KINETIC CHEMICALS, INC., TENTH & MARKET STREETS, WILMINGTON, DELAWARE

Directors Leading Drive For NACA Members

(Concluded from Page 1, Column 4)
General Engineering Corp., 1014 Jennings Ave., Fort Worth, Texas; John H. Keller, treasurer, Mechanical Heat & Cold, Inc., 7704 Woodward Ave., Detroit, Mich.; A. C. Buensod, Buensod-Stacey Air Conditioning, Inc., 60 E. 42nd St., New York City; E. R. Cooney, Cooney Refrigeration Co., Inc., 215 Chandler St., Buffalo, N. Y.; Alfred Epstein, Independent Refrigeration Co., 2689 W. Pico St., Los Angeles, Calif.; Fred A. Hessick, Combustioneer Corp., 409 10th St., Washington, D. C.; M. S. LeBair, York Ice Machinery Corp., 1238 N. 44th St., Philadelphia, Pa.; S. J. Shure, Natkin & Co., 3920 Lindell, St. Louis, Mo.

Mr. Page states that the association has been established "for the purpose of improving the standards of the general sale and application of comfort cooling throughout the United States, and is for the welfare of everyone vitally interested in the business of true comfort cooling."

The National Air Conditioning Association was formally organized during the Second Refrigeration and Air Conditioning Exhibition, held in January of this year.

Wittlin Joins Rotary Seal

CHICAGO — Albert Wittlin has joined the Rotary Seal Co. organization, and will spend most of his time in the field, calling on jobbers and aiding them in their sales problems.

N.Y. Utility 'Disbars' Brooklyn Dealer

(Concluded from Page 1, Column 5)
cooperating appliance dealers."

The Brooklyn dealer group, in its counter complaint, claimed that the utility's action was purely a retaliatory measure, and was unfair to Mr. Scholder inasmuch as all his actions and stated viewpoints in this matter had been merely expressions of the dealers whom he represented as president of the Brooklyn association, and thus should not affect his capacity as an individual approved dealer.

To place its complaint definitely on record, the Brooklyn dealer group adopted it in the form of a resolution and a plea for Mr. Scholder's reinstatement. This resolution was signed by more than 100 dealers.

Public Power Appliance Selling Gets Court O. K.

(Concluded from Page 1, Column 2)
ances is intimately connected with and incidental to the sale and distribution of gas, the court held, in that it directly tends to accomplish the general purpose for which the authority was granted.

"If a municipal corporation legally acquires a public utility plant," the ruling read, in part, "with the right to operate it for the benefit of its inhabitants, it would likewise acquire by implication the right to do all things that a private owner might do. . . ."

North Carolina Dealers Pledge NACA Support

GREENSBORO, N. C.—Support of the National Air Conditioning Association was assured at the annual meeting of the North Carolina Air Conditioning Association held here April 20, when Jesse W. Page, retiring president of the local association and president of the National Association, presented the objectives of the National Air Conditioning Association to members of the local body.

Mr. Page reported details concerning the formation of the National Air Conditioning Association during the Second All-Industry Refrigeration & Air Conditioning Exhibition at the Stevens hotel, Chicago, to members of the North Carolina Air Conditioning Association.

Officers of the North Carolina Air Conditioning Association elected for the ensuing year were: Sterling Nicholson, Nicholson, Inc. (Airtemp distributor) Durham, N. C., president; S. A. Sigler, Air Conditioning Corp. (Carrier dealer) Greensboro, N. C., vice president; C. W. Gold, Jr., Atlantic Coal Co. (General Electric dealer) Greensboro, N. C., secretary and treasurer.

In accordance with the constitution of the North Carolina association these officers in turn elected Van Sisk of Charlotte, N. C. (Frick distributor) and J. Earl Sneed of Wilmington, N. C. (York distributor), to serve with the officers on the executive committee of the association. It was resolved to hold regular meetings throughout the year.

Appliance Dealer Builds For Future Volume In Unit Conditioners With Promotion Plan

(Concluded from Page 1, Column 4)
since. Based on past performance, the shop expects a 50% increase in sales volume this year.

The newspaper schedule is based on weekly advertisements of 2 column inches, running nine months a year on the business pages. These small ads are simple but compelling, illustrated with either a self contained unit or the York trademark. A complete \$695 installation is often featured. Aimed at the small store, the ads offer terms of \$15 a month. "Reader" stories on recent installations or new models also are used with editorial illustrations.

NEWSPAPER ADS AND RESULTS

In season, larger display space is used to tell the profit returns and comfort values of store air conditioning. Seasonal copy and art tell the trials of "sitting in the hot seat," and headlines proclaim "60% of Air Conditioning in Columbus is York-aire."

The newspaper campaign is primarily designed to identify the Good Housekeeping Shop with York air conditioning. However, it does bring in queries at the rate of 10 to 20 a month. Such prospects are unusually good in the long run, and rarely are they merely from the curious. Occasionally a salesman can close such a prospect on the first call. Much newspaper space is on a co-operative basis with York, but the shop uses a good bit of the larger space on its own.

DIRECT MAIL SCHEDULE

A carefully planned direct mail program is an important part of the advertising effort. Imprinted York literature is used, and lists are revised at each mailing. The current schedule shows clearly the basic planning:

April 1—Broadside—500 selected better prospects.

April 15—Broadside—500 same list (follow-up).

May 5—Broadside—500 same list (additional follow-up).

May 5—Customer Help Card Mailed—600 customers.

May 15—Small Folder—2,000 general prospects outside select list.

July 1—Large Broadside—300 most active prospects.

SUPPLY PIECES TO USERS

The Customer Help Mailers offer the client a promotion piece for his store, to tell his customers about his new air conditioning. They are furnished in quantities of 500 to 1,000 and free of advertising for the Good Housekeeping Shop except for a small York credit line.

Floor display consists of six models, ranging from the small portable to the larger self-contained store models. Showrooms are open evenings until 9 o'clock for the benefit of the merchant who is busy during the daytime. Regular floor periods are divided among salesmen who often obtain leads from visitors. The store itself is air conditioned by a unit model, to demonstrate the effectiveness of the low horsepower models.

PROSPECT FILE TURNOVER

Prospect file lists every store in Columbus. The cards are given, a few at a time, to salesmen, who then call on the prospects and make a report. Borderline enterprises and those not suitable for selling are removed from the files. In this way a contact is made with every firm, and no one is overlooked. Additional leads are furnished by food, beverage, and equipment salesmen friendly toward the organization. Users are the best source of live prospects.

Ray A. Connor is department sales manager, and acts as chief engineer. He divides the prospects into two groups, and instructs his men on how to size each type up. These groups require a different handling.

MAILED BY 'TYPES'

One type are the "passively" interested. They get the profit story on how air conditioning helps business. The other type is the prospect who is ready to buy, but still shopping. They get a folder showing the full line of units, followed by suggestions as to the best type for their

store and a discussion of their exact needs.

Salesmen quote no exact figures on the cost of a job, although they often refer to the general price range. A company engineer does a survey on the interested client's location and makes specific recommendations, together with a definite price. Salesmen are trained to make accurate estimates of the particular requirements, so that the engineer's reports will fall into line with the installation which the salesman has been talking.

INFORMING THE SALESMAN

A major problem is keeping salesmen up-to-date on air conditioning developments. Today the man on the street knows a good deal about air conditioning, and asks a lot of technical questions. Mr. Connors believes that his men must know how to talk extensively on any phase, or they will be at a disadvantage in selling.

Newspaper Advertisement Used By Columbus Dealer (About Exact Size)

Do You Know

You Can Completely Air Cool Small Stores for as low as **\$695**

COMPLETE
Call us for estimate of your room.

GOOD HOUSEKEEPING SHOP
180 SOUTH HIGH STREET

To meet this problem, daily meetings and school sessions are held each morning. One particular phase of air conditioning is explained and discussed at each session. Actual sales instruction is sublimated to knowledge of the air conditioning industry.

Once a month, factory representatives hold "schools" for the men. These run three days, with part of the time devoted to primary instruction of the newer men. Those who have had the instruction once attend only the advanced sessions, which cover new developments.

'NO EXPERIENCE' DESIRABLE

Salesmen with no air conditioning experience are preferred. They usually come from other fields of selling, and none are ever transferred from the household appliance or other departments of the store. The man new to air conditioning can be more easily trained in the methods and techniques which the store employs, it has been found.

Biggest business, of course, begins with the first warm weather. This year four units were sold on the first warm, sunny day. Early sales are largely carry-overs from the previous season who have been worked all winter. During the heavy selling season, the entire department devotes all of its time to air conditioning.

Salesmanager Connor believes that the trend is strongly to the packaged unit type, and sales efforts are concentrated in this direction. Today the best field for package sales is the funeral home, according to the store's experience, although in the general conditioning field the restaurants, bars, and night clubs still lead.

KEEPS STOCK ON HAND

Packaged units are carried in stock for prompt delivery, and during the hot months a potent sales closer is the offer to install the conditioner the same day. In addition to manufacturer sales contests, Good Housekeeping works up many contests of its own to stimulate the competition between salesmen.

There is no substitute for house-to-house and store-to-store calls, Mr. Connor believes. His policy is to stress strongly the need for calls and contacts day in and day out. His men go over the city with a "fine-tooth comb," and talk to everyone in business. You can't size up a prospect from the phone book, Mr. Connor says—the only way to miss no sales is to see everybody.

whatever your

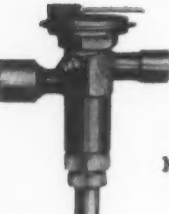
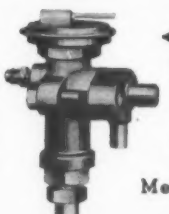
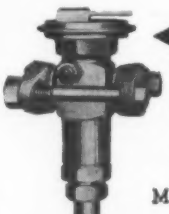
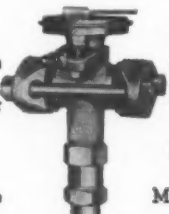
AIR-CONDITIONING PROBLEM---

SPORLAN offers you



the largest and most complete line of




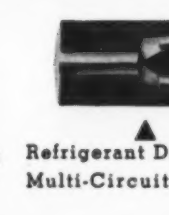
AIR-CONDITIONING VALVES TO CHOOSE FROM
to give you . . .

 TYPE L Sweat Connections Freon 10 Tons Methyl Chloride 20 Tons	 TYPE R Single Flange With Sweat Connections (Angle) Freon 10 Tons Methyl Chloride 20 Tons	 TYPE O Straight Through Flanged With Solder Flanges Freon 10 Tons Methyl Chloride 20 Tons	 TYPE P Straight Through Flanged With Solder Flanges Freon 20 Tons Methyl Chloride 40 Tons
---	--	--	---

PEAK PERFORMANCE

 TYPE T Straight Through Flanged With Solder Flanges Freon 50 Tons Methyl Chloride 100 Tons	 TYPE S Single Flange With Sweat Connections (Angle) Freon 20 Tons Methyl Chloride 40 Tons	 TYPE H Flare Connections Freon 3 Tons Methyl Chloride 6 Tons	 TYPES 10 and 20 F. P. T. Connections Freon 4 Tons Methyl Chloride 8 Tons
---	--	---	--

on all Air-Conditioning Installations

 TYPE 40 Sweat Connections Freon 9 Tons Methyl Chloride 18 Tons	 TYPE 50 Sweat Connections Freon 20 Tons Methyl Chloride 40 Tons	 PILOT CONTROL A Magnetic Shut-off for Sporlan Expansion Valves	 Refrigerant Distributor for Multi-Circuit Evaporators
---	--	---	--

SPOEHRER-LANGE COMPANY
3725 COMMONWEALTH AVE. ST. LOUIS, MO.

All-Industry 'Packaged Cooling' Drive Is the Surest Short Cut To Volume Sales, P. B. Zimmerman Declares

By Paul B. Zimmerman

Those of us who have been close to the marketing picture in the electrical industry during the past 25 years know that the time is ripe to offer an additional service to the electrical customer. The many products that have been offered have proved of great benefit and while each has seemed high priced initially, the service has so outweighed the cost that a high percentage of electrical customers are now finding these products indispensable for better living.

In the past few years both the cost of electrical products and the cost of electric current have had such favorable reductions that the public is willing to use every new electric servant which is completely understandable in terms of its benefits to the home.

EDUCATION IS COSTLY

During this last quarter century we have also learned that new products require much educational work and demonstration to gain the confidence of the public. Some 75% of the effort during the introductory period of these new products is educational and is expensive for any one manufacturer.

The glass industry, for instance, soon learned that shatter-proof glass could best be promoted jointly by the manufacturers in the automotive industry as "safety glass," and once the public understood the contribution of the industry—without conflicting stories on the features of each manufacturer's product—this new type of glass became of interest and was generally accepted. The joint effort of the group reduced the cost of marketing tremendously in its introductory period.

We are also familiar with the success of the Western Citrus Growers in banding together to widen their market and thus greatly increase their business while reducing their cost of distribution.

UTILITY SUPPORT HELPFUL

Electrical manufacturers are more fortunate than others in introducing new products in that they have the backing and support of the electric utilities. The utilities shouldered a great part of the burden in introducing such new services as electric vacuum cleaning, clothes washing, electric refrigeration, electric cooking, etc. Many of these services are now well understood and the manufacturers' individual marketing strategy pays good dividends.

Air conditioning is the great new service the manufacturers and utilities should now be demonstrating to the electrical customer. The name has been a misnomer and the public questions whether it has any broad application outside of large institutions and public buildings.

Those who have been close to this business know that the hundreds of thousands who became the first users of air conditioning appreciate its benefits and will never willingly be without them.

REACHING MASS MARKET

Just as in the early days of refrigeration we learned that food protection was a vital service which justified a high priced refrigerator over a low cost cooling service, so here we are learning that properly conditioned air is of great economic benefit and well worth its cost.

The sales engineer has been able to reach and demonstrate these values to the large buyer. But the mass of buyers in office, shop, and home can be reached only by mass education. The industry now has a product, in packaged air conditioning made available by a number of manufacturers, at a popular price which compares favorably with the introductory offers of other products.

Price alone, however, will not sell packaged air conditioning—not until the market is well sold on the idea. The public must know more of the virtues of the service as a whole and should have a common buying guide that will give it some sense of confidence in making first purchases.

There is no question but what there would be a great economy to all if the manufacturers and the utilities would join forces at this time in promoting packaged air conditioning as an idea and extol all its virtues so that with this tremendous force they could overcome the public resistance to the new service.

Truly, air conditioning is a sleeping giant that can best be energized by the united efforts of the electrical manufacturers, the utilities, and the local dealer organizations. America is waiting for a new electric servant and none offers an opportunity greater than this new service of packaged air conditioning.

Room Cooler Selling Made Easy

By S. F. Myers, Sales Manager, Air Conditioning & Commercial Refrigeration Dept., Westinghouse Electric & Mfg. Co.

Have you purchased an insurance policy lately? Well, if you have, you've experienced the quick business-like manner in which the salesman arrived at the final rate cost. He asked you your birthday and year you were born. That was all. Then he took out his little pocket manual, turned to the page which listed the premium for your particular age rate and quoted you a rate. It was just as easy as that.

During 1940, many retail salesmen will be selling Westinghouse (Mobilier) air conditioners who know nothing about wet or dry-bulb temperatures, B.t.u. or high and low suction pressures and they will care less. Yet, they will be good salesmen and realize money can be made selling room coolers to a ready market.

Since many of these salesmen will not be experienced air conditioning engineers, a simple survey book

known as the Selectoguide, for choosing the correct room cooler for any given room, has been worked out in detail for them. This book, we believe, is the simplest device ever prepared for this purpose.

It is strictly non-technical, no slide rules are needed—in fact, B.t.u. does not appear in the book once. Every necessary calculation has been carefully worked out by the engineer.

There are two Selectoguides, to fit the two heat zones of the country. To select the proper Westinghouse room cooler "Mobilier" for a room, only three simple steps are required;

1—Find Selectoguide page corresponding to room area.

2—Determine sun exposure of outside walls and select proper section of page.

3—Determine window protection and area and locate proper subsection and line. Then read number and size of Mobilair required.

'Selectoguide' Sample

240 SQ. FT. ROOM SIZE					
EXPOSURE	PROTECTION	WINDOWS		MOBILAIRS NEEDED	
		AREA SQ. FT.	WA-04	WA-06	
NIGHT - NO SUN EXPOSURE	With or without Blinds or Awnings	15		1	
		20		1	
		25		1	
		30		1	
		35		1	
1 OUTSIDE WALL SUN ON WALL	Venetian Blinds or Awnings	15	2		
		20	2		
		25	2		
		30	2		
		35	1	1	
	UNSHADED	15	1	1	
		20		2	
		25		2	
		30	2	1	
		35	2	1	
2 OUTSIDE WALLS SUN ON EITHER OR BOTH	Sunny Side with Venetian Blinds or Awnings	15	2		
		20	2		
		25	2		
		30	2		
		35	2		
	UNSHADED	15	2		
		20	2		
		25	1	1	
		30	1	1	
		35	1	1	

VOLUME PROFIT ?



SELL
Gale

If you sell on **QUALITY**
Just compare GALE with any other make.
If you sell on **PRICE**
GALE prices make you the tough competition.
If you sell on **FEATURES**
GALE gives more, model for model, price for price.
If you sell on **NAME**
The GALE name stands for quality and extra value.

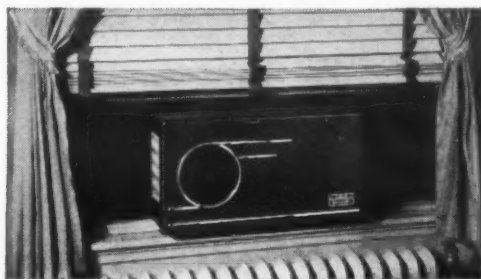
THE KIT PLAN licks your biggest problems! It lets you show more models and at the same time cut your inventory investment. Builds volume and profits! It's NEW! It's GOOD! It will make money for you!

LOW PRICES put Gale in a more favorable position than ever! Gale prices are emphatically RIGHT! With Gale, you meet competition without sacrificing your margin. Your profits will NET bigger with Gale!

FACTORY TO YOU makes lower prices and closer cooperation possible. Gale gives you everything you need to do profitable refrigerator volume. Real help . . . protected territories . . . no high pressure or quotas.

FEATURES that SELL! Model for model, price for price, Gale gives you features that give you a head-start with value-wise prospects. It's a complete line! A profitable one regardless of how many refrigerators you sell!

GALE PRODUCTS
GALESBURG, ILLINOIS
In Canada, GALE Products, Peterboro, Ontario



Your present sales force can profitably sell GALE Portable Air Conditioning Units! Compact, plug-in appliances—easy to sell, easy to install (no plumbing or special wiring). Two models, popularly priced!

Division of
Outboard, Marine
and
Manufacturing Co.

**"ANY DEALER CAN
MAKE EXTRA PROFITS
WITH GALE"**

GALE Products
1635 Monmouth Blvd.
Galesburg, Illinois

GENTLEMEN:

Send facts on Gale refrigerators
Rush full information on Gale Portable Air Conditioning Units ☐

COMPANY _____

STREET _____

CITY _____

BY _____

STATE _____

TITLE _____



Key Product Specifications on 1940 Self-Contained Air Conditioners

Editor's Note: On the next 5 pages is a tabulation of the principal points of product information about the new models of self-contained air conditioning equipment being offered to the field.

All of the manufacturers were asked to submit prices and capacities, but not all complied, so this part of the information is not complete.

All of the equipment listed is strictly of the self-contained type (complete with refrigerating machine) except Peerless which, however, is furnished with a condenser, and needs only a bare compressor to complete the assembly.

Philco Radio & Television Corp.

Philco-York Air Conditioners Model 41 Window Type

Dimensions: 16 1/4 inches high, 23 1/2 inches wide, and 10 1/2 inches deep.
Functions: Cooling, dehumidifying, and circulating (cleaning optional).
Cabinet: Walnut, with matched butt walnut inlays.

Condensing Unit: 1/2-hp. York compressor, manual control.

Blower: Driven by compressor motor.
Air Circulation: Air intake at ends, air discharge at front, through vane-type outlet. Room exhaust provided. Room air circulation, 150 c.f.m.

Cooling Surface: No information given.
Capacity of Unit: 3,675 B.t.u. (no conditions given).

Suggested or List Price: \$129.50.

Model 61 Window Type

Dimensions: 14 inches high, 36 1/2 inches wide, 15 inches deep.
Functions: Cooling, dehumidifying, circulating, and cleaning.

Cabinet: Metal cabinet, with two-tone enamel finish.
Condensing Unit: York 1/2-hp. compressor.

Blower: Driven by 1/25-hp. motor.
Air Circulation: Air intake at top, discharge at front through adjustable louvers. Fresh air intake provided. Room air circulation, 210 c.f.m. Room exhaust provided.

Cooling Surface: No information given.
Capacity of Unit: 5,750 B.t.u. (no conditions specified).

Air Cleaning Medium: Glass wool filter.

Suggested or List Price: \$189.50.

Control Equipment: Manual start-and-stop, air changer control, and outside control.

Model 62 Floor Type

Dimensions: 39 1/2 inches high, 30 inches wide, and 15 1/2 inches deep.

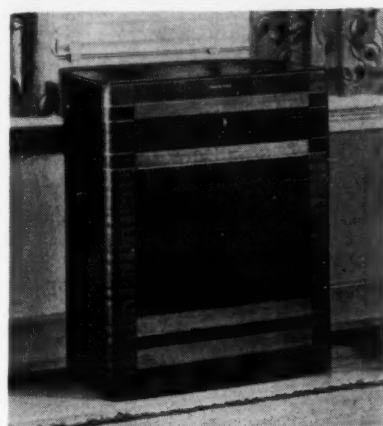
Functions: Cooling, dehumidifying, circulating, and cleaning.

Cabinet: Console type with contrasting grain walnut wood finish. Cabinet unit enclosed with Celotex sound-absorbing material backed with steel panels.

Condensing Unit: 1/2-hp. York compressor with manual control.

Air Circulation: Air discharge at front through adjustable louvers, fresh air intake connection provided. Room air circulation 220 c.f.m.

Cooling Surface: Information not given.
Capacity of Unit: 5,750 B.t.u. (no conditions specified).



Philco Model 91 Floor Unit.

Air Cleaning Medium: Glass wool filter.
Suggested or List Price: \$250.00.
Control Equipment: Start-and-stop switch, air changer control, outside air control.

Model 91 Floor Type

Dimensions: 39 1/2 inches high, 31 inches wide, and 15 1/2 inches deep.

Functions: Cooling, dehumidifying, circulating, and cleaning.

Cabinet: Walnut cabinet.

Condensing Unit: 3/4-hp. York compressor, manual control.

Blower: Driven by 1/2-hp. motor.

Air Circulation: Air intake at back, air discharge at front through adjustable louvers. Connection for outside air provided. Room circulation 310 c.f.m. Room exhaust means provided.

Cooling Surface: Information not given.
Capacity of Unit: 9,100 B.t.u. (no conditions specified).

Air Cleaning Medium: Glass wool filter.

Suggested List Price: \$365.00.

Control Equipment: Start-and-stop switch, air changer control, and outside air control.

Certified Products Co.

Wizardaire Room Conditioner (Standard Model)

Dimensions: 14 1/2 inches high, 27 inches wide, and 16 1/2 inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating.

Cabinet: Furniture steel cabinet, enamel finish with acoustic and thermal insulation.

Condensing Unit: Tecumseh 1/2-hp. 2-cylinder "Freon-12" hermetic compressor, driven at 1,725 r.p.m.

Blower: 8-inch aluminum propeller fan driven at 1,600 r.p.m. from 1/20-hp. motor.

Air Circulation: Air intake at right side, quantity of outside air may be adjusted; air discharge at front of unit, horizontally, may be adjusted three ways. Room air circulation 160 c.f.m. Filtered fresh air while cooling—0-30 c.f.m.

Air Volume: Ventilation 0-80 c.f.m. when not cooling. Air discharged through special metal grille at 350 f.p.m.

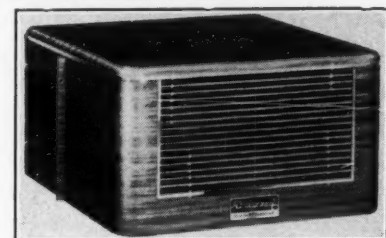
Cooling Surface: Bush continuous tube, individual fin evaporator with 14.5 sq. ft. surface. Copper tubing, brass fins.

Capacity of Unit: 4,160 B.t.u. at outside condition of 90° F. dry bulb, 75° F. wet bulb.

Air Cleaning Medium: By evaporator fan, hair glass filter.

Suggested or List Price: \$149.50.

Control Equipment: Two toggle switches: one for cooling and one for ventilation.



Airtemp Window Cooler.

Air Circulation: Air intake at floor, air discharge on inclined face of cabinet through selector type grille.

Cooling Surface: Serpentine coil with copper fins on copper tubing.

Capacity of Unit: Not given.

Air Cleaning Medium: Throw-away type filter.

Suggested or List Price: Not given.

Controls: Circulating fan and cooling control switch.

Model FC-90 Floor Type

Dimensions: 36 inches high, 36 1/2 inches wide, and 18 1/2 inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating. Exhaust feature.

Cabinet: Two-tone walnut grain on steel. Grille to match. Insulated.

Condensing Unit: Airtemp 3/4-hp. 4-cylinder "Freon-12" radial compressor.

Blower: Two multiblade blowers, 5 inches in diameter.

Air Circulation: Air intake at floor, air discharge on inclined face of cabinet through selector-type grille.

Cooling Surface: Serpentine coil with copper fins on copper tubing.

Capacity of Unit: Not given.

Air Cleaning Medium: Throw-away filter.

Suggested or List Price: Not given.

Control Equipment: Circulating fan and cooling control switch.

Model 3 SCB Floor Type

Dimensions: 89 1/2 inches high, 31 1/2 inches wide, and 19 1/2 inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating.

Cabinet: Blue Morocco wrinkle finish on Bonderized steel. Chromium plated hardware. Insulated.

Condensing Unit: Airtemp 3-hp. 3-cylinder "Freon-12" radial compressor.

Blower: Multiblade blower, 9 1/4-inch diameter.

Air Circulation: Air discharge at top front of cabinet through selector-type grille.

Cooling Surface: Serpentine coil with copper fins on copper tubing.

Capacity of Unit: Not given.

Air Cleaning Medium: Throw-away type filter.

Suggested or List Price: Not given.

Control Equipment: Thermostat, fan and compressor starting control.

Model 5SC Floor Type

Dimensions: 97 1/2 inches high, 48 1/2 inches wide, and 19 1/2 inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating.

Cabinet: Blue Morocco wrinkle finish on Bonderized steel. Chromium plated hardware. Insulated.

Condensing Unit: Airtemp 5-hp. 3-cylinder "Freon-12" radial compressor.

Blower: Multiblade blowers, 10 inches in diameter.

Air Circulation: Air discharge at top front of cabinet through selector-type grille.

Cooling Surface: Serpentine coil with copper fins on copper tubing.

Capacity of Unit: Not given.

Air Cleaning Medium: Throw-away type filter.

Suggested or List Price: Not given.

Control Equipment: Thermostat, fan and compressor starting control.

Wizardaire Window Cooler.

Wizardaire Room Conditioner (Deluxe Model)

Dimensions: 24 1/2 inches high, 27 inches wide, and 16 1/2 inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating.

Cabinet: Furniture steel cabinet finished in enamel and with acoustic and thermal insulation.

Condensing Unit: Tecumseh 1/2-hp. 2-cylinder "Freon-12" hermetic compressor, driven at 1,725 r.p.m.

Blower: 8-inch aluminum propeller fan driven at 1,600 r.p.m. from 1/20-hp. motor.

Air Circulation: Air intake at right side, quantity of outside air may be adjusted; air discharge at front of unit, horizontally, may be adjusted three ways. Room air circulation, 160 c.f.m. Filtered fresh air while cooling—0-30 c.f.m.

Air Volume: Ventilation—0-300 c.f.m. Exhaust—250 c.f.m. (Both when not cooling.) Air discharged through special metal grille at 350 f.p.m.

Cooling Surface: Bush continuous tube, individual fin evaporator with 14.5 sq. ft. surface. Copper tubing, brass fins.

Capacity of Unit: 4,160 B.t.u. at outside condition of 90° F. dry bulb and 75° F. wet bulb.

Air Cleaning Medium: By evaporator fan, hair glass filter. By condenser fan, viscous type paper filter (when used as a ventilating unit).

List Price: \$169.50.

Control Equipment: Single selector switch for cooling, ventilation, or exhaust.

Airtemp Division, Chrysler Corp.

Model WC-40 Window Mounted

Dimensions: 11 1/2 inches high, 21 inches wide, and 23 1/2 inches deep.

Functions: Cooling, dehumidifying, and circulating. Exhaust feature.

Cabinet: Walnut grain finish on steel. Stainless steel grille and trim. Insulated.

Condensing Unit: Airtemp 1/2-hp. 2-cylinder "Freon-12" radial compressor.

Blower: Multiblade blower, 6 inches in diameter.

Air Circulation: Supply and return grille on front of cabinet.

Cooling Surface: Serpentine coil with copper fins on copper tubing.

Capacity of Unit: Not given.

Suggested or List Price: Not given.

Controls: Start-stop switch, exhaust control.

Model FC-60 Floor Type

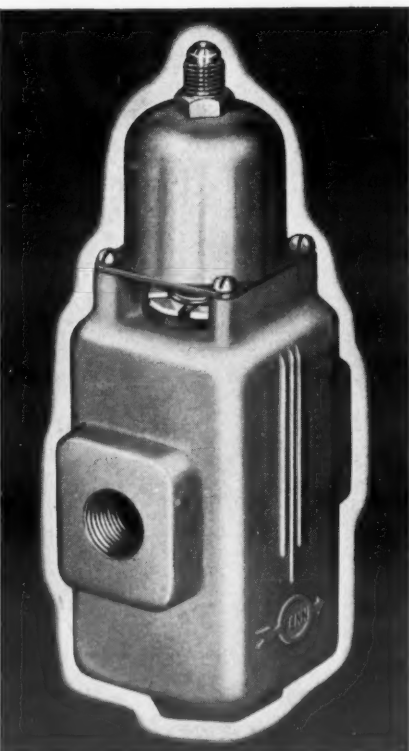
Dimensions: 35 inches high, 31 1/2 inches wide, and 18 1/2 inches deep.

Functions: Cooling, dehumidifying, cleaning, circulating. Exhaust feature.

Cabinet: Two-tone walnut grain on steel. Grille to match. Insulated.

Condensing Unit: Airtemp 1/2-hp. 2-cylinder "Freon-12" radial compressor.

Blower: Multiblade blower, 5 inches in diameter.



Capacities to Fit Each Application

Penn 230 Series Water Regulators are available in 1/4", 3/8", 1/2" and 3/4" I.P.T. water line connections, providing a cooling capacity both efficient and economical. Capacity of each of these sizes for typical city water pressures, at head pressure 30 pounds above opening point setting of the valves, is shown in the table below:

Type Number	I.P.T. Size	Capacity (G.P.M.) at city water pressure of			
		10 lbs.	30 lbs.	50 lbs.	70 lbs.
230P02	1/4"	3.25	6.6	8.25	9.0
230P03	3/8"	4.75	8.75	10.75	12.5
230P04	1/2"	8.0	15.3	19.75	22.0
230P06	3/4"	12.25	23.25	30.0	33.25

Penn 230 Series Valves introduce for the first time a pilot operated regulator for 1/4" I.P. water line connections. On units requiring a limited amount of cooling water, larger valves do not open fully, thus contributing to wire drawing of seats, chatter and other problems. The Type 230P02 is tailored for such units, eliminates problems of over-size valves... is attractively priced.

Penn 250 Series pilot operated balanced type water regulating valves handle all requirements for larger capacity valves to 2 1/2" I.P.T. size. 250 Series valves also are available with Monel bellows in steel cup for ammonia service. Both 230 Series and 250 Series Water Valves are available for temperature operation, on order.



Actual use will show the fine features of these valves. Here is the main valve piston, showing cut-away centers to reduce friction and permit any foreign particles to escape quickly.

Valve stem is non-corrosive stainless steel. Packless bellows-sealed type originally developed by Penn. Provides positive lift of main valve in the event of sticking.

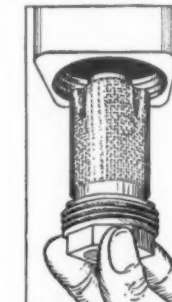


Fine mesh Monel strainer serves as a retainer in which all operating parts are assembled and held in position for inserting into valve after inspection.

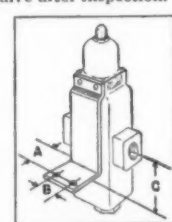
Opening point setting may be changed quickly and easily in any mounting position or location. A screwdriver or bar is all that is required. Opening point range—50 to 125 lbs. standard.



Self-centering, polished face replaceable brass seat is especially free from wire drawing, because of interior design of valve. Standard in all sizes.



Many special mounting brackets, tooled and ready for immediate delivery, are available at slight additional cost.



● There is a fine dividing line between the efficient cooling that you know a water cooled system requires and the low water consumption demanded by so many users.

Penn 230 Series Water Regulators are available in the choice of sizes and capacities shown at the right. From this list it is easy to select a regulator "tailored" for both efficient and economical cooling.

These new Penn Water Regulators are pilot operated, balanced type valves—balanced throughout the full opening point range of the valve as well as against any city water pressure to 150 pounds. This assures uniform opening of the valve, regardless of surges and variations in water line pressures. It also assures near-peak water capacity within 30 to 35 pounds above the opening point of the valve—the normal maximum increase in high side pressure during an ordinary cycle of operation.

Needless waste of water is eliminated by the close operating differential of Penn 230 Series Regulators. These valves, in all sizes, close only two to three pounds below the opening point.

Other design and construction features that will appeal to the experienced refrigeration engineer are: 1. Non-corrosive stainless steel and brass operating parts. 2. Fine mesh Monel strainer. 3. Replaceable polished brass seat. 4. Ease of disassembling and reassembling for periodic cleaning. 5. Modern streamline appearance.

Refrigeration service engineers can secure Penn 230 Series Water Regulators from their regular refrigeration parts and accessories jobbers. Detailed engineering bulletin available to compressor manufacturers and the trade upon request.

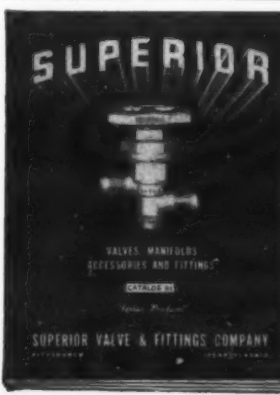
Penn Electric Switch Co., Goshen, Indiana. In Canada: Powerlite Devices, Ltd., Penn Electric Switch Division, Toronto, Ontario. Export: 100 Varick St., New York City. Branches, representatives and distributors in all principal cities.

More information on what Penn Controls will do for you—One of a Series.

PENN

Penn-Built Controls for Many Applications

Thermostats, Bonnet Controls, Ductstats, Fire Protection Controls, Water Temperature Controls, Boiler Pressure Controls, Humidistats, Stack Switches, Stoker Timer Relays, Solenoid Gas Valves, General Purpose Relays, Solenoid Refrigerant and Water Valves, Refrigeration Pressure and Temperature Controls, Water Valves, Pump Controls, Air Compressor Controls, Air Volume Controls, Line Starters.



Just off the Press!

SUPERIOR CATALOG R1

Includes numerous NEW items, such as Quick-Couplers, Pressure Cup Globe Valves, Nickel Bronze Manifolds and Rapid-Chargers. Also the now famous SUPERIOR Diaphragm Packless Valves, Economizers, Check Valves, Dryers, Filters and Fittings. It's invaluable for selecting Valve and Fitting requirements.

Write For Your Copy Today

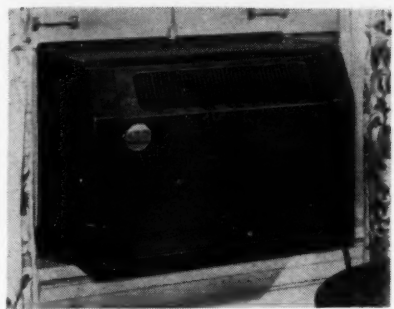
SUPERIOR VALVE & FITTINGS CO.
1509 WEST LIBERTY AVENUE • PITTSBURGH, PA.
EXPORT: 100 VARICK STREET, NEW YORK, N.Y., CABLES, ARLAB

SELF-CONTAINED AIR CONDITIONERS

Kauffman (Cont.)

(Continued from Page 6, Column 5)

Functions: Cooling, dehumidifying, cleaning, and circulating.
Cabinet: Same as Type "Y."
Condensing Unit: Kauffman ¾-hp. 2-cylinder "Freon-12" compressor driven at 600 r.p.m.
Blower: Squirrel-cage type blower, 8½-inch diameter.
Air Circulation: Air intake at top, air discharge at front near bottom, through Kauffman grille. Fresh air intake. Room air circulation 220 c.f.m.
Cooling Surface: Copper tube and fins.
Capacity of Unit: 5,700 B.t.u. at 80° F. dry bulb, 67° F. wet bulb.
Air Cleaning Medium: Filter.
Suggested or List Price: \$190.00.
Control Equipment: Control switch.



Kauffman Window Mounted Cooler.

Type "W" Floor Model

Dimensions: 34½ inches high, 27 inches wide, and 15 inches deep.
Functions: Cooling, dehumidifying, cleaning, circulating. Heating optional.
Cabinet: Steel, walnut baked enamel finish, 1-inch insulation.
Condensing Unit: Kauffman ¾-hp. 2-cylinder "Freon-12" compressor driven at 610 r.p.m.
Blower: Squirrel-cage type blower, 8½-inch diameter.
Air Circulation: Air intake at top, air discharge at front near top through Kauffman grille. Fresh air intake. Room air circulation 250 c.f.m.
Cooling Surface: Finned type, copper tube, copper fin, tin plated.
Capacity of Unit: 6,000 B.t.u. at 80° F. dry bulb, 67° F. wet bulb.
Air Cleaning Medium: Copper wool filter.
Suggested or List Price: \$250.00.
Control Equipment: One control switch.

Type "A" Floor Model

Dimensions: 41 inches high, 34 inches wide, 17½ inches deep.
Functions: Cooling, dehumidifying, cleaning, circulating. Heating optional.
Cabinet: Same as Type "W."
Condensing Unit: Kauffman 1-hp. 2-cylinder "Freon-12" compressor driven at 970 r.p.m.
Blower: Squirrel-cage type blower, 9-inch diameter.
Air Circulation: Air intake at top, air discharge at front near top through Kauffman grille. Fresh air intake. Room air circulation 310 c.f.m.

Cooling Surface: Copper tube and fins.
Capacity of Unit: 9,000 B.t.u. at 80° F. dry bulb, 67° F. wet bulb.
Air Cleaning Medium: Copper wool filter.
Suggested or List Price: \$350.00.
Control Equipment: One control switch.

Type "B" Floor Model

Dimensions: 43 inches high, 39 inches wide, and 17½ inches deep.
Functions: Cooling, dehumidifying, cleaning, circulating. Heating optional.
Cabinet: Same as Type "W."
Condensing Unit: Kauffman 1½-hp. 2-cylinder "Freon-12" compressor driven at 550 r.p.m.
Blower: Squirrel-cage type blower, 9-inch diameter.
Air Circulation: Air intake at top, air discharge at front near top through Kauffman grille. Fresh air intake. Room air circulation 420 c.f.m.
Cooling Surface: Copper tube and fins.
Capacity of Unit: 12,000 B.t.u. at 80° F. dry bulb, 67° F. wet bulb.
Air Cleaning Medium: Copper wool filter.
Suggested or List Price: \$425.00.
Control Equipment: One control switch.

Model 17 (Store & Office Type)

Functions: Cooling, dehumidifying, cleaning, circulating. Heating optional.
Cabinet: Steel, brown baked enamel finish, 1-inch insulation.
Condensing Unit: Kauffman 1½-hp. 2-cylinder "Freon-12" compressor.
Blower: Squirrel-cage type blower, 9-inch diameter.
Air Circulation: Air intake at front, air

discharge at top of front. Fresh air if desired. Room air circulation 600 c.f.m.
Cooling Surface: Copper tube and copper fins.

Capacity of Unit: 19,700 B.t.u. at 80° F. dry bulb, 67° F. wet bulb.
Air Cleaning Medium: Filter.
Suggested or List Price: Governed by kind of current used.

Other models in the Kauffman store cooler line have the same characteristics as Model 17, with the following differences in capacity:

Model 20: 2-hp. unit, 10-inch blower, 25,000 B.t.u. capacity, 800 c.f.m. air delivery.

Model 30: 3-hp. unit, 10-inch blower, 37,900 B.t.u. capacity, 1,250 c.f.m. air delivery.

Model 50: 5-hp. unit, two 10-inch blowers, 62,300 B.t.u. capacity, 2,000 c.f.m. air delivery.

Model 75: 7½-hp. unit, two 12-inch blowers, 88,800 B.t.u. capacity, 2,800 c.f.m. air delivery.

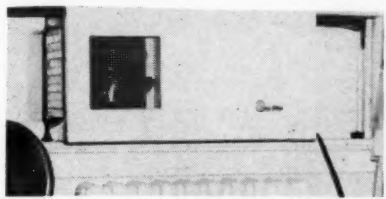
Model 100: 10-hp. unit, two 12-inch blowers, 114,000 B.t.u. capacity, 4,500 c.f.m. air delivery.

Model 150: 15-hp. unit, two 15-inch blowers, 183,000 B.t.u. capacity, 6,500 c.f.m. air delivery.

Pleasantaire Corp.

Northwind

Dimensions: 14 inches high, 27 inches wide, and 15 inches deep.
Functions: Cooling, dehumidifying, cleaning, and circulating.
Cabinet: Furniture steel, finished in silver taupe Dulux, insulated with ½-inch of acoustical material.
Condensing Unit: ½-hp. 2-cylinder "Freon-12" or methyl chloride compressor driven at 500 r.p.m.
Blower: Circulating fan driven by ¼-hp. motor.



Pleasantaire Window Cooler.

Air Circulation: Room air circulation 240 c.f.m.

Cooling Surface: Copper coil.
Capacity of Unit: 4,000 B.t.u. at outdoor 95° F. dry bulb and 75° F. wet bulb.
Air Cleaning Medium: Spun glass filter.
Suggested or List Price: \$139.50.
Control Equipment: Manual switch.

Pleasantaire Unit Conditioner

Dimensions: 14 inches high, 27 inches wide, and 15 inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating.
Cabinet: Furniture steel, silver taupe finish (ivory optional), ½-inch acoustical insulation.

Condensing Unit: ½-hp. 2-cylinder "Freon-12" or methyl chloride compressor driven at 500 r.p.m.

Blower: Circulating fan driven by ¼-hp. motor.

Air Circulation: Air intake at side, air discharge at front. Fresh air intake provided. Room air circulation 240 c.f.m.

Cooling Surface: Double row copper tubing with fins.

Capacity of Unit: 5,000 B.t.u. at 95° F. dry bulb, 75° F. wet bulb.

Air Cleaning Medium: Spun glass filter.
Suggested or List Price: \$169.50.
Control Equipment: Manual switch.

Westinghouse Electric & Mfg. Co.

Model WA-04 Mobilaire

Dimensions: 13½ inches high, 26½ inches wide, and 23½ inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating.
Cabinet: Wood cabinet, furniture type construction, walnut finish.

Condensing Unit: Westinghouse ½-hp. 2-cylinder "Freon-12" hermetic condensing unit, driven at 1,725 r.p.m.

Blower: Propeller type, driven at 1,140 r.p.m. by ¼-hp. motor.

Air Circulation: Air intake at front, air discharge at front through louvers. Fresh air intake. Room air circulation, 140 c.f.m.

Cooling Surface: Finned copper tube.
Air Cleaning Medium: Cellular fiber-board filter.

Suggested Retail Price: \$149.50.
Control Equipment: Manual switch.

Model WA-06 Mobilaire

Dimensions: 15½ inches high, 27½ inches wide, 24½ inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating. Exhaust feature also provided.

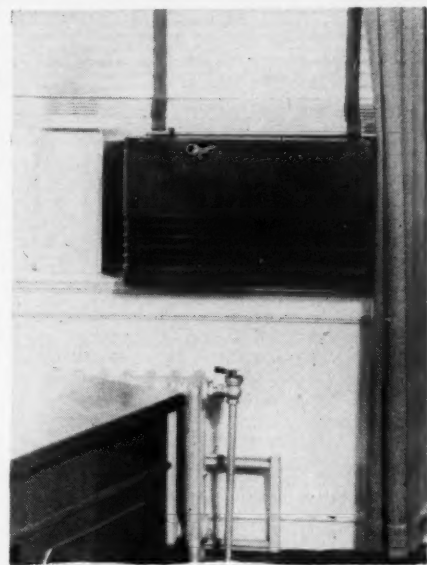
Cabinet: Wood cabinet, furniture type construction, walnut finish.

Condensing Unit: Westinghouse ½-hp. 2-cylinder "Freon-12" hermetic compressor, driven at 1,725 r.p.m.

Blower: Centrifugal type, driven at 1,140 r.p.m. by ¼-hp. motor.

Air Circulation: Air intake at front, air discharge at front through metal bar grille. Fresh air intake. Room air circulation, 200 c.f.m.

Cooling Surface: Finned copper tube.
Air Cleaning Medium: Glass wool filter.
Suggested Retail Price: \$209.50.
Control Equipment: Manual switch.



Westinghouse Window Cooler.

Model FA-09 Mobilaire

Dimensions: 33½ inches high, 32 inches wide, and 18½ inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating. Exhaust feature provided.

Cabinet: Wood cabinet, furniture type construction, walnut finish.

Condensing Unit: Westinghouse ¾-hp. single cylinder "Freon-12" hermetic compressor driven at 1,725 r.p.m.

Blower: Centrifugal type, driven at 1,560 r.p.m. by ½-hp. motor.

Air Circulation: Air intake at rear, air discharge at top through louvers. Fresh air intake. Room air circulation 300 c.f.m.

Cooling Surface: Finned copper tube.
Air Cleaning Medium: Glass wool filter.
Suggested Retail Price: \$375 f.o.b.
Control Equipment: Manual switch.

Model CU-45 Room Cooler

Dimensions: 26 inches high 38 inches wide, and 24 inches deep.

Functions: Cooling, dehumidifying, cleaning, circulating. Heating optional.

Cabinet: Welded steel construction, brown wrinkle finish. Suspended or platform mounting.

Condensing Unit: Westinghouse 1-hp. single cylinder "Freon-12" hermetic compressor driven at 1,160 r.p.m.

Blower: Centrifugal type, driven at 700 r.p.m. by ¾-hp. motor.

Air Circulation: Air intake at front, air discharge at front.

(Continued on Page 8, Column 1)

MORE HELP FOR 1940

IN 1938 we wrote an advertisement headlined "More Help for 1938" in which we presented a brief picture of the greatly expanded line of Imperial products for refrigeration and air conditioning work. That was also the first year for our condensed catalog that has since received so much favorable comment from service men everywhere.

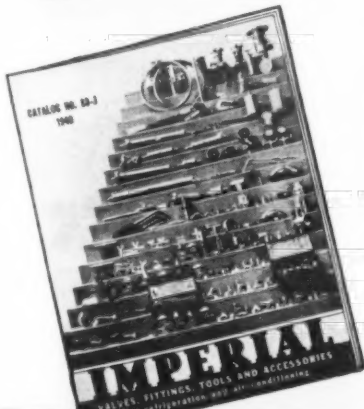
Since we wrote that headline two years ago, Imperial has again stepped up the line with many new improvements. In the set-up shown at the right you see many of the fittings, tools, dehydrators, strainers and other items that will make the installation and servicing job easier.

As we viewed this rather imposing array of steps holding all these Imperial Products, we wanted to write "Step Up Your Profits with Imperial Products" but we figured the 1938 headline, brought up to date, would get over the idea we wanted to convey.

The picture at the right, by-the-way, is from the front cover of the new 1940 condensed catalog that covers all these Imperial items plus a lot more. Most jobbers now have them for distribution and we suggest you ask for your copy. A little study of this catalog will really convince you we mean what we say in "More Help for 1940".

ASK YOUR JOBBER FOR A COPY

THE IMPERIAL BRASS MFG. CO.
 565 S. Racine Avenue, Chicago, Illinois



IMPERIAL

Air Conditioning and Refrigeration Products

STRAINERS • DEHYDRATORS • VALVES • FITTINGS • FLOATS • CHARGING LINES • TOOLS FOR CUTTING, FLARING, BENDING, COILING, PINCH-OFF AND SWEDGING

SELF-CONTAINED AIR CONDITIONERS

Westinghouse (Cont.)

(Continued from Page 7, Column 5)

Cooling Surface: Finned copper tube, face area 1.22 sq. ft., total area 83 sq. ft.
Heating Surface: Finned copper tube, face area 1.2 sq. ft., total area 27 sq. ft.
Air Cleaning Medium: Glass wool filter.
Suggested List Price: Not given.
Control Equipment: Water regulator.

Model SU-90 Room Cooler

Dimensions: 92½ inches high, 34½ inches wide, and 23½ inches deep.
Functions: Cooling, dehumidifying, circulating, and cleaning. Heating and humidification optional.
Cabinet: Welded steel cabinet, brown wrinkle finish.

Condensing Unit: Westinghouse 2½-hp. 2-cylinder "Freon-12" hermetic compressor, driven at 1,160 r.p.m.

Blower: Centrifugal blower, driven at 520-730 r.p.m. by ½-hp. motor.

Air Circulation: Air intake at front, air discharge at front. Fresh air intake. Room air circulation 570-1,330 c.f.m.

Cooling Surface: Finned copper tube, face area 1.9 sq. ft., total area 173 sq. ft.

Heating Surface: Finned copper tube, face area 2 sq. ft., total area 92 sq. ft.

Humidifier: Atomizing spray type, 14 lbs./hr.

Air Cleaning Medium: Glass wool filter.

Suggested List Price: Not given.

Control Equipment: Manual switch, thermostat, water regulator.

Model SU-135 Room Cooler

Dimensions: 92½ inches high, 46½ inches wide, and 23½ inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating. Heating and humidification optional.

Cabinet: Welded steel cabinet, brown wrinkle finish.

Condensing Unit: Westinghouse 3½-hp. 2-cylinder "Freon-12" hermetic compressor, driven at 1,750 r.p.m.

Blower: Centrifugal blower, driven at 690-935 r.p.m. by ½-hp. motor.

Air Circulation: Air intake at front, air discharge at front. Fresh air intake. Room air circulation 810-1,880 c.f.m.

Cooling Surface: Finned copper tube, face area 2.7 sq. ft., total area 245 sq. ft.

Heating Surface: Finned copper tube, face area 2.5 sq. ft., total area 115 sq. ft.

Humidifier: Atomizing spray type, 28 lbs./hr.

Air Cleaning Medium: Glass wool filter.

Suggested List Price: Not given.

Control Equipment: Manual switch, thermostat, water regulator.

Model SU-205 Room Cooler

Dimensions: 92½ inches high, 46½ inches wide, and 23½ inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating. Heating and humidification optional.

Cabinet: Welded steel cabinet, brown wrinkle finish.

Condensing Unit: Westinghouse 5-hp. 4-cylinder "Freon-12" hermetic compressor, driven at 1,150 r.p.m.

Blower: Centrifugal blower, driven at 590-850 r.p.m. by ½-hp. motor.

Air Circulation: Air intake at front and side, air discharge at front. Fresh air intake. Room air circulation, 1,180-2,750 c.f.m.

Cooling Surface: Finned copper tube, face area 3.93 sq. ft., total area 360 sq. ft.

Heating Surface: Copper tube, face area 4.5 sq. ft., total area 410 sq. ft.

Humidifier: Atomizing spray type, 28 lbs./hr.

Air Cleaning Medium: Glass wool filter.

Suggested List Price: Not given.

Control Equipment: Manual switch, thermostat, water regulator.

Model LU-275 Unitaire

Dimensions: 29½ inches high, 54 inches wide, and 48½ inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating.

Cabinet: Welded steel, gray lacquer finish.

Condensing Unit: Westinghouse 7½-hp.

4-cylinder "Freon-12" hermetic compressor, driven at 1,730 r.p.m.

Blower: Centrifugal blower, driven at 650-840 r.p.m. by 1½-hp. motor.

Air Circulation: Air intake at front, air discharge at top. Fresh air intake. Room air circulation, 1,520-3,550 c.f.m.

Cooling Surface: Finned copper tube, face area 5.1 sq. ft., total area 465 sq. ft.

Heating Surface: Finned copper tube, face area 6 sq. ft., total area 273 sq. ft.

Humidifier: Atomizing spray type, 35 lbs./hr.

Air Cleaning Medium: Glass wool filter.

Suggested List Price: Not given.

Control Equipment: Water regulator.

Model LU-415 Unitaire

Dimensions: 66½ inches high, 70½ inches wide, and 48½ inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating. Heating and humidification optional.

Cabinet: Welded steel, with gray lacquer finish.

Condensing Unit: Westinghouse 10-hp. 4-cylinder "Freon-12" hermetic compressor, driven at 870 r.p.m.

Blower: Centrifugal type, driven at 650-840 r.p.m. by a 2-hp. motor.

Air Circulation: Air intake at front, air discharge at top. Fresh air intake. Room air circulation, 2,500-5,800 c.f.m.

Cooling Surface: Finned copper tube, face area 8.3 sq. ft., total area 755 sq. ft.

Heating Surface: Finned copper tube, face area 9 sq. ft., total area 410 sq. ft.

Humidifier: Atomizing spray, 58 lbs./hr.

Air Cleaning Medium: Glass wool filter.

Suggested List Price: Not given.

Control Equipment: Water regulator.

Model LU-550 Unitaire

Dimensions: 66½ inches high, 82½ inches wide, and 48½ inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating. Heating and humidification optional.

Cabinet: Welded steel, gray lacquer finish.

Condensing Unit: Westinghouse 15-hp. 4-cylinder "Freon-12" hermetic compressor, driven at 1,150 r.p.m.

Blower: Centrifugal type, driven at 650-840 r.p.m. by 3-hp. motor.

Air Circulation: Air intake at front, air discharge at top. Fresh air intake. Room air circulation 3,100-7,200 c.f.m.

Cooling Surface: Finned copper tube, face area 10.3 sq. ft., total area 940 sq. ft.

Heating Surface: Finned copper tube, face area 10 sq. ft., total area 455 sq. ft.

Humidifier: Atomizing spray, 72 lbs./hr.

Air Cleaning Medium: Glass wool filter.

Suggested List Price: Not given.

Control Equipment: Water regulator.

Model LU-640 Unitaire

Dimensions: 73½ inches high, 100 inches wide, and 59½ inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating. Heating and humidification optional.

Cabinet: Welded steel, gray lacquer finish.

Condensing Unit: Westinghouse 20-hp. 6-cylinder "Freon-12" hermetic compressor, driven at 870 r.p.m.

Blower: Centrifugal blower, driven at 500-650 r.p.m. by a 5-hp. motor.

Air Circulation: Air intake at front, air discharge at rear. Fresh air intake. Room air circulation 3,700-8,700 c.f.m.

Cooling Surface: Finned copper tube, face area 12.4 sq. ft., total area 1,130 sq. ft.

Heating Surface: Finned copper tube, face area 12 sq. ft., total area 545 sq. ft.

Humidifier: Atomizing spray type, 87 lbs./hr.

Air Cleaning Medium: Glass wool filter.

Suggested List Price: Not given.

Control Equipment: Water regulator.

Model LU-850 Unitaire

Dimensions: 73½ inches high, 100 inches wide, and 59½ inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating. Heating and humidification optional.

Cabinet: Welded steel, gray lacquer finish.

Condensing Unit: Westinghouse 25-hp. 6-cylinder "Freon-12" hermetic compressor, driven at 1,150 r.p.m.

Blower: Centrifugal type, driven at 450-600 r.p.m. by a 5-hp. motor.

Air Circulation: Air intake at front, air discharge at rear. Fresh air intake. Room air circulation 4,600-10,750 c.f.m.

Cooling Surface: Finned copper tube, face area 15.4 sq. ft., total area 1,400 sq. ft.

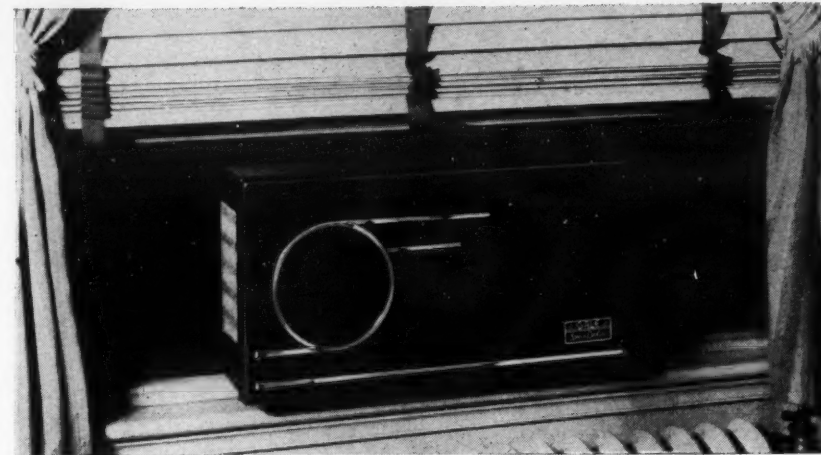
Heating Surface: Finned copper tube, face area 15 sq. ft., total area 680 sq. ft.

Humidifier: Atomizing spray type, 107 lbs./hr.

Air Cleaning Medium: Glass wool filter.

Suggested List Price: Not given.

Control Equipment: Water regulator.



Gale Window Type Room Air Conditioner.

Gale Products

Deluxe Model No. G5TR

Dimensions: 14 inches high, 27 inches long, and 14½ inches wide.

Functions: Cools, dehumidifies, cleans, and circulates.

Cabinet: Steel, baked enamel finish. Silver taupe finish. Chromium trim. Installed with acoustical liner.

Condensing Unit: Gale 2-cylinder methyl chloride compressor driven at 435 r.p.m. by ½-hp. motor.

Air Circulation: Air delivered is both recirculated and fresh air. Total, 200 c.f.m.

Cooling Surface: Double rows, copper tube and fin coil. Total length of coil, approximately 20 feet.

Capacity: 4,700 B.t.u. per hour (no conditions specified).

Air Cleaning: Recirculated air cleaned by contact with wet surfaces of cooling coil and fins. Outside air filtered through spun glass filter.

List Price: \$169.50.

Controls: Thermostatic expansion valve.

Standard Model No. SC4

Dimensions: 14 inches high, 27 inches long, and 15½ inches wide.

Functions: Cools, dehumidifies, cleans, and circulates.

Cabinet: Steel, baked enamel finish. Walnut finish. Chromium trim. Acoustical liner.

Condensing Unit: Gale 2-cylinder methyl chloride compressor, driven at 435 r.p.m. by a ½-hp. motor.

Air Circulation: Air delivered is both recirculated and fresh air. Total, 200 c.f.m.

Cooling Surface: Double rows, copper tube and fin coil. Total length of coil, approximately 20 feet.

Capacity: 4,000 B.t.u. per hour (no conditions specified).

Air Cleaning: Recirculated air cleaned by contact with wet surfaces of cooling coils and fins.

List Price: \$129.50.

Controls: Thermostatic expansion valve.

York Ice Machinery Corp.

Yorkaire Model 225 Store Cooler

Dimensions: 72 inches high (with special top), 36 inches wide, 20 inches deep.

Functions: Cooling, dehumidifying, cleaning, circulating. Heating and humidifying optional.

Cabinet: Steel panels suspended on hooks, acoustically insulated, sepiat satin finish.

Condensing Unit: York 2-hp. "Freon-12" compressor.

Blower: 4-blade, propeller-type, slow-speed fan.

Air Circulation: Air intake at rear, air discharge at front or rear at top, or on top, through adjustable grille. Room air circulation 760 c.f.m.

Cooling Surface: Copper fins on staggered copper tubes.

Capacity of Unit: Not given.

Air Cleaning Medium: Fiberglass filter.

Suggested or List Price: Not given.

Control Equipment: Thermostat, control switch, water regulator.

Yorkaire Model 350 Store Cooler

Dimensions: 84 inches high (with special top), 42 inches wide, 21½ inches deep.

Functions: Cooling, dehumidifying, cleaning, circulating. Heating and humidifying optional.

Cabinet: Same as Model 225.

Condensing Unit: York 3-hp. "Freon-12" compressor.

Blower: Adjustable diameter type.

Air Circulation: Air intake at rear, air discharge at front or rear at top, or on top, through adjustable grille. Room air circulation 900 to 1,500 c.f.m.

Cooling Surface: Same as Model 225.

Capacity of Unit: Not given.

Air Cleaning Medium: Fiberglass filter.

Suggested or List Price: Not given.

Control Equipment: Thermostat, control switch, water regulator.

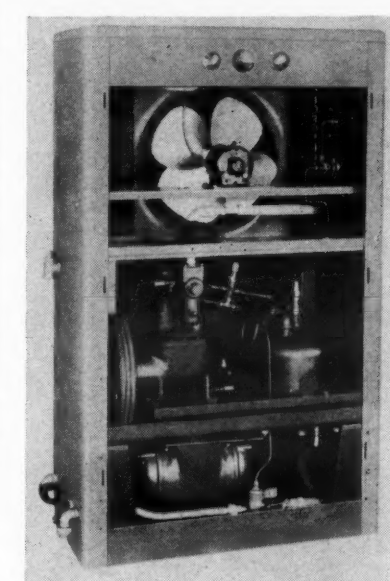
Model 550 Yorkaire Store Cooler

Dimensions: 85 inches high (with special top), 42 inches wide, 21½ inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating. Heating and humidifying optional.

Cabinet: Same as Model 225.

Condensing Unit: York 5-hp. "Freon-12" compressor.



'Insides' of York Model 225.

Blower: Adjustable diameter type.

Air Circulation: Air intake at rear, air discharge at front or rear at top, or on top, through adjustable grille. Room air circulation 1,200 to 2,200 c.f.m.

Cooling Surface: Copper fins on staggered copper tubing.

Capacity of Unit: Not given.

Air Cleaning Medium: Fiberglass filter.

Suggested or List Price: Not given.

Control Equipment: Thermostat, control switch, and water regulator.

Model 700 Yorkaire Self-Contained Central Type

Dimensions: 70 inches high, 49 inches wide, and 36 inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating. Heating and humidification optional.

Cabinet: Three section, metal panel construction.

Condensing Unit: Two York 3-hp. "Freon-12" condensing units. Thermostatic control.

Air Circulation: Air circulation through separate fan section at top by 1½-hp. blower, permitting air discharge in any amount or direction desired.

Cooling Surface: Separate coil for each compressor.

Capacity of Unit: Not given.

Air Cleaning Medium: Filter.

Suggested or List Price: Not given.

Control Equipment: Dependent upon application.

Models 1000 and 1500 Yorkaire Self-Contained Central Type

These models similar to Model 700, except that Model 1000 has two 5-hp. compressors, and Model 1500 has three 5-hp. compressors and a 3-hp. blower.

General Electric Co.

Window Type Room Conditioner

FA-50

Dimensions: 19 inches high, 28 inches wide, and 30 inches deep.

Functions: Cooling, dehumidification, and circulation.

Cabinet: Walnut wood top with grained leather sides over steel.

Condensing Unit: G-E ½-hp. 2-cylinder "Freon-12" compressor.

Blower: Centrifugal fan, 6 inches in diameter.

Air Circulation: Room air circulation, 200 c.f.m.

Cooling Surface: Finned copper tube.

Capacity: 5,000 B.t.u. net, A.S.R.E. standard rating.

Air Cleaning Medium: Lint screen.

Price: \$179.50 f.o.b. for standard installation.

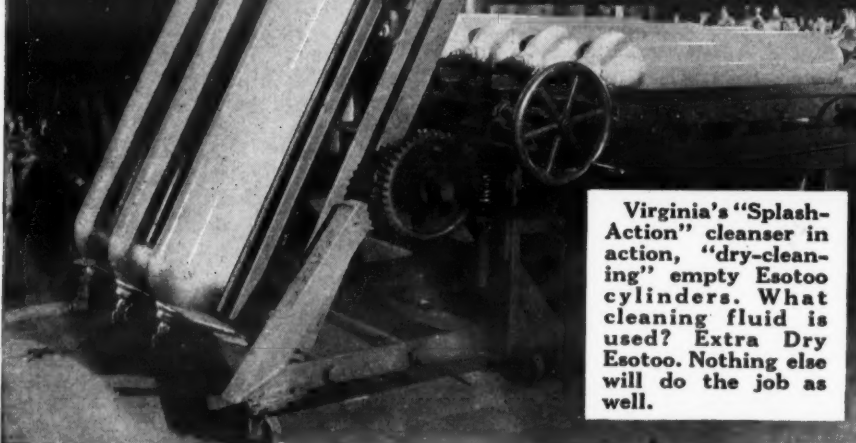
Control Equipment: Manual switch.

Console Room Conditioner FB-50

Dimensions: 33 inches high, 37 inches wide, and 18 inches deep. (39 inches high including control panel.)

(Continued on Page 9, Column 1)

VIRGINIA'S CYLINDERS TAKE THEIR OWN MEDICINE



Virginia's "Splash-Action" cleanser in action, "dry-cleaning" empty Esotoo cylinders. What cleaning fluid is used? Extra Dry Esotoo. Nothing else will do the job as well.

High-speed cleaning of empty cylinders at the Virginia Smelting Co. Plant cuts time between receipt and recharge by speeding their routing through the Plant and simplifying storage problems. The method we use cuts the percentage of cylinders rejected in final inspection—all adding up to smoother Plant operations and better service to you.

EXTRA DRY ESOTOO V-METH-L METHYLENE CHLORIDE

VIRGINIA SMELTING COMPANY

Located at Tidewater, Hampton Roads
West Norfolk, Virginia

THIS YEAR -- IT'S MIDWEST'S MODELS 25 AND 30

'SIZZLING HOT' WITH SALES APPEAL

QUALITY-PRICE CAPACITY-BEAUTY

These two "profit makers" are the leading models in Midwest's famous line of reach-ins. Full 28 and 35 cubic feet NET capacity. Exclusive Midwest Steelwood construction, heavily insulated. Triple coat porcelain interiors; Bonderized high-bake DULUX exterior finish. Adjustable shelves. Model 25 has space for compressor.



General Electric Console Model Room Cooler.

General Electric (Cont.)

(Continued from Page 8, Column 5)

Functions: Cooling, dehumidification, cleaning, and circulation.**Cabinet:** "Dashboard" control panel; walnut wood top; antique leather sides over steel.**Condensing Unit:** G-E 1/2-hp. 2-cylinder "Freon-12" compressor.**Blower:** For room air, three centrifugal fans on same shaft, each with 8-inch diameter. Separate condenser fan.**Air Circulation:** Air discharge is from slotted molding at top front. Room air circulation, 200 c.f.m. Ventilation control feature.**Cooling Surface:** Finned copper tube. Capacity: 6,000 B.t.u. net, A.S.R.E. standard rating.**Air Cleaning Medium:** For fresh air, wire mesh filter. For recirculated air, glass wool filter.**Price:** \$249.50 f.o.b. for standard installation.**Control Equipment:** Manual switches.**Console Room Conditioner FB-70****Dimensions:** 33 inches high, 37 inches wide, and 19 inches deep. (39 inches high including control panel.)**Functions:** Cooling, dehumidification, cleaning, and circulation.**Cabinet:** "Dashboard" type control panel; walnut wood top, antique leather sides over steel.**Condensing Unit:** G-E 3/4-hp. 2-cylinder "Freon-12" compressor.**Blower:** Three centrifugal fans on same shaft, each with 6-inch diameter.**Air Circulation:** Air discharge is from slotted molding at top front. Ventilation control feature. Room air circulation, 280 c.f.m.**Cooling Surface:** Finned copper tube. Capacity: 8,000 B.t.u. net, A.S.R.E. standard rating.**Air Cleaning Medium:** For fresh air, wire mesh filter. For recirculated air, glass wool filter.**Price:** \$364.50 f.o.b. for standard installation.**Control Equipment:** Manual switches.**Unit "Store" Air Conditioner FD-15****Dimensions:** 67 inches high, 32 inches wide, and 19 inches deep.**Functions:** Cooling, dehumidification, cleaning, and circulation. Humidification and heating optional.**Cabinet:** Sheet steel insulated panels over steel frame, golden brown finish.**Condensing Unit:** G-E 1/2-hp. 2-cylinder "Freon-12" compressor.**Blower:** Centrifugal fan, 10 1/2 inches in diameter.**Air Circulation:** Air discharges at top. Room air circulation, 650 c.f.m.**Cooling Surface:** Finned copper tube.**Heating Surface:** Uses cooling surface.**Capacity:** 1.65 tons net, A.S.R.E. standard rating.**Humidification:** Extended surface type.**Air Cleaning Medium:** Glass wool filter.**Control Equipment:** Thermostat, water regulator valve.**Unit "Store" Air Conditioner FD-20****Dimensions:** 67 inches high, 32 inches wide, and 19 inches deep.**Functions:** Cooling, dehumidification, cleaning, and circulation.**Cabinet:** Sheet steel insulated panels over steel frame. Golden brown finish.**Condensing Unit:** G-E 2-hp. 2-cylinder "Freon-12" compressor.**Blower:** Centrifugal fan, 10 1/2 inches in diameter.**Air Circulation:** Air discharges at top. Room air circulation, 650 c.f.m.**Cooling Surface:** Finned copper tube.**Heating Surface:** Uses cooling surface.**Capacity:** 2.09 tons net, A.S.R.E. standard rating.**Humidification:** Extended surface type.**Air Cleaning Medium:** Glass wool.**Control Equipment:** Thermostat, water regulator valve.**Humidification:** Extended surface type.
Air Cleaning Medium: Glass wool filter.
Control Equipment: Thermostat and water regulator.**Unit "Store" Air Conditioner FD-100****Dimensions:** 91 inches high, 58 inches wide, and 27 inches deep. (101 inches high when air distributor used.)**Functions:** Cooling, dehumidification, cleaning, and circulation.**Cabinet:** Sheet steel insulated panels over steel frame, golden brown finish.**Condensing Unit:** G-E 10-hp. 4-cylinder "Freon-12" compressor.**Blower:** Two centrifugal fans 13 inches in diameter.**Air Circulation:** Air discharges at top. Room air circulation, 2,800 c.f.m.**Cooling Surface:** Finned copper tube.**Heating Surface:** Uses cooling surface.**Capacity:** 9.45 tons net, A.S.R.E. standard rating.**Humidification:** Extended surface type.**Air Cleaning Medium:** Glass wool filter.**Control Equipment:** Thermostat and water regulator.**Curtis Refrigerating Machine Co.****Model 300-SOC****Dimensions:** 89 1/2 inches high, 36 inches wide, and 21 1/2 inches deep.**Functions:** Cooling, dehumidifying, cleaning, circulating. Heating optional.**Cabinet:** Galvanneal steel, welded steel structure, Hammerloid finish.**Condensing Unit:** Curtis 3-hp. 2-cylinder "Freon-12" compressor, driven at 600 r.p.m. Thermostatic control.**Blower:** Multi-vane, slow-speed fan.**Air Circulation:** Air intake at front center, air discharge at front top through adjustable grilles. Discharge velocity 1,020 f.p.m. Room air circulation 1,600 c.f.m.**Cooling Surface:** Balanced coil, face area 3.5 sq. ft.**Capacity of Unit:** 38,750 B.t.u. with entering air at 80° F. dry bulb, 67° F. wet bulb.**Air Cleaning Medium:** Wet zone, all metal filter.**Suggested or List Price:** Not given.**Control Equipment:** Thermostat, fan and motor switch.

Curtis Store Cooler Unit.

Model 500-SOC**Dimensions:** 89 1/2 inches high, 36 inches wide, 21 1/2 inches deep.**Functions:** Cooling, dehumidifying, cleaning, circulating. Heating optional.**Cabinet:** Same as Model 300-SOC.**Condensing Unit:** Curtis 5-hp. 2-cylinder "Freon-12" condensing unit driven at 690 r.p.m. Thermostatic control.**Blower:** Multi-vane, slow-speed fan.**Air Circulation:** Air intake at front center, air discharge at front top through adjustable grilles. Discharge velocity 1,340 f.p.m. Room air circulation 2,100 c.f.m.**Cooling Surface:** Balanced coil, face area 3.5 sq. ft.**Capacity of Unit:** 63,250 B.t.u. with entering air at 80° F. dry bulb, 67° F. wet bulb.**Air Cleaning Medium:** Wet zone, all metal filter.**Suggested or List Price:** Not given.
Control Equipment: Thermostat, fan and motor switch.**Model 750-CTAC Self-Contained Central Type****Dimensions:** 75 1/2 inches high, 69 inches wide, and 33 1/2 inches deep.**Functions:** Cooling, dehumidifying, cleaning, circulating. Heating optional.**Cabinet:** Automobile steel, neutral gray finish. Top section heat and sound insulated.**Condensing Unit:** Curtis 7 1/2-hp. 2-cylinder "Freon-12" condensing unit driven at 690 r.p.m.**Blower:** Multi-vane type, 2 fan wheels, driven at 520 r.p.m. by 1/2-hp. motor.**Air Circulation:** Air intake at top rear, air discharge at front top. Room air circulation, 3,200 c.f.m.**Capacity of Unit:** 87,000 B.t.u. per hour with entering air at 80° F. dry bulb, 67° F. wet bulb.**Air Cleaning Medium:** All metal filters.**Suggested or List Price:** Not given.**Control Equipment:** Thermostat, control switch.**Model 1000-CTAC Self-Contained Central Type****Dimensions:** 75 1/2 inches high, 69 inches wide, and 33 1/2 inches deep.**Functions:** Cooling, dehumidifying, cleaning, circulating. Heating optional.**Cabinet:** Same as Model 750-CTAC.**Condensing Unit:** Curtis 10-hp. 4-cylinder "Freon-12" condensing unit driven at 590 r.p.m. Thermostatic control.**Blower:** Multi-vane type, 2 fan wheels, driven at 650 r.p.m. by a 3/4-hp. motor.**Air Circulation:** Air intake at rear top, air discharge at front top. Room air circulation 4,200 c.f.m.**Capacity of Unit:** 128,000 B.t.u. with entering air at 80° F. dry bulb, 67° F. wet bulb.**Air Cleaning Medium:** Wet zone, all metal filters.**Suggested or List Price:** Not given.**Control Equipment:** Thermostat, fan and motor switch.**Model 1500-CTAC Self-Contained Central Type****Dimensions:** 75 inches high, 84 inches wide, and 34 inches deep.**Suggested or List Price:** Not given.**Control Equipment:** Thermostat, fan and motor switch.

(Continued on Page 10, Column 1)

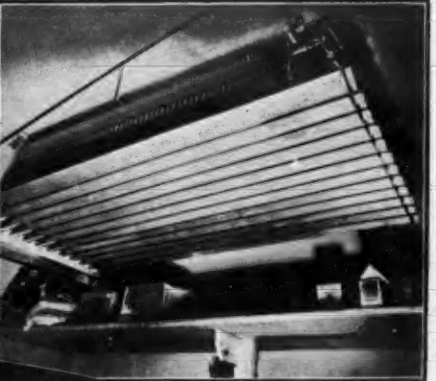
As modern as tomorrow — this attractive bar in the Greensburger Hotel, Greensburg, Pa., calls upon A-P Valves for dependable, accurate temperature control at all times.



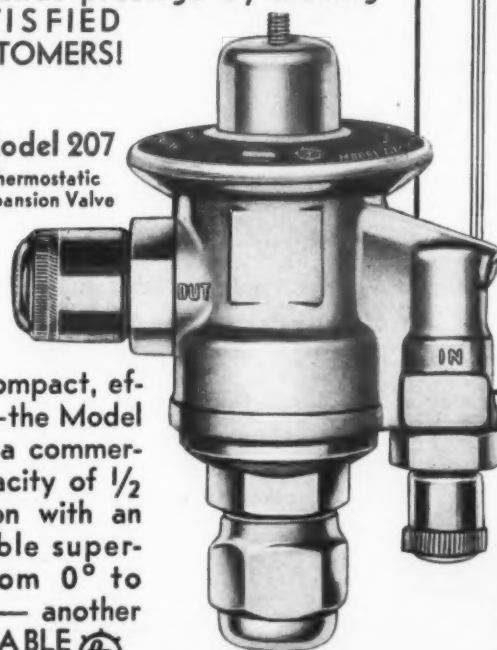
Refrigeration requirements at the Greensburger, with temperatures ranging from +38° to 15° below zero, are efficiently maintained by these modern Willco Compressors — A-P Controlled.



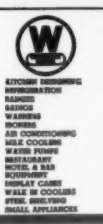
A hotel's reputation is dependent upon the service of its table — Day in and day out, A-P Valves faithfully perform their duty in maintaining proper temperatures for the Greensburger's frozen food storage.

**DEPENDABLE REFRIGERATION Controlled**

This open endorsement of A-P DEPENDABILITY is typical of leading Jobbers and Servicemen from coast to coast. Experts in their chosen field, they are quick to realize that A-P DEPENDABILITY spells EXTRA PROFITS in doing away with unnecessary "call backs" — builds prestige by making SATISFIED CUSTOMERS!

Model 207
Thermostatic
Expansion Valve

Small, compact, efficient — the Model 207 has a commercial capacity of 1/2 ton Freon with an adjustable superheat from 0° to 30° F. — another DEPENDABLE PRODUCT.

**APPLIANCE SALES COMPANY**

Westmoreland County's Leading Domestic & Commercial Refrigeration Distributor

GREENSBURG, PA.

March 28, 1940

Automatic Products Company
Milwaukee, Wisconsin

Attn: Mr. E. A. Vallee

We have been using Automatic Products Controls for years and have always found them to be thoroughly dependable.

Many of our installations require them to serve such unusual temperature ranges as in our recent installation at the Greensburger Hotel, Greensburg, Penna., where we maintain temperatures from 15° below zero to 38° above.

Very truly yours,

APPLIANCE SALES COMPANY

Herbert E. Kahan
MANAGER

Progressive Servicemen use and recommend — and Aggressive Jobbers stock and talk — A-P Products.

AUTOMATIC PRODUCTS COMPANY2450 NORTH THIRTY-SECOND STREET
MILWAUKEE WISCONSIN

Export Department 100 Varick Street, New York City

Sell PACKAGED AIR CONDITIONING**DEALERS:** Get the facts about the GR-Lipman line of complete, "packaged" Air Conditioning Equipment . . . portable, self-contained units for year-round air filtration and ventilation; summer cooling and dehumidification. An unlimited market; an outstanding line. Write:**GENERAL REFRIGERATION CORPORATION**
Dept. AC-2 Beloit, Wis., U. S. A.

SELF-CONTAINED AIR CONDITIONERS

Curtis (Cont.)

(Continued from Page 9, Column 5)

Functions: Cooling, dehumidifying, cleaning, and circulating.**Cabinet:** Same as Model 750-CTAC.**Condensing Unit:** Curtis 15-hp. 4-cylinder "Freon-12" compressor driven at 590 r.p.m. Thermostatic control.**Blower:** Multi-vane type, 3 fan wheels, driven at 650 r.p.m. by 1-hp. motor.**Air Circulation:** Air intake at top rear, air discharge at front top. Room air circulation 6,300 c.f.m.**Capacity of Unit:** 186,000 B.t.u. with entering air at 80° F. dry bulb, 67° F. wet bulb.**Air Cleaning Medium:** All metal filters.**Suggested or List Price:** Not given.**Control Equipment:** Thermostat, control switch.

Peerless of America, Inc.

Model WB-30

Dimensions: 86 inches high, 35 inches wide, and 22 inches deep.**Functions:** Cooling, dehumidifying, cleaning, and circulating. Heating and humidifying optional.**Cabinet:** Sheet steel with rounded corners, 1/2-inch Airacoustic insulation, walnut Hammeroid finish.**Condensing Unit:** Compressor not included. Shell and Thermek coil condenser.**Blower:** One 1/2-hp. blower, 10 inches in diameter.**Air Circulation:** Fresh air intake optional, Uni-flo grille. Room air circulation 1,200 c.f.m.**Cooling Surface:** Copper Thermek.**Heating Surface:** Copper Thermek.**Capacity of Unit:** Cooling capacity varies depending on compressor size. Heating capacity with 5 lbs. steam and 60° F. entering air, 91,500 B.t.u.**Humidification:** Spray type. Capacity, 4.5 g.p.h.**Air Cleaning Medium:** Air-Maze cleanable bronze filter.**Suggested or List Price:** Not given.**Control Equipment:** Thermostat, magnetic liquid solenoid, water regulating valve.**Humidification:** Spray type. Capacity, 4.5 g.p.h.**Air Cleaning Medium:** Air-Maze cleanable bronze filter.**Suggested or List Price:** Not given.**Control Equipment:** Thermostat, magnetic liquid solenoid, water regulating valve.**Model WB-50****Dimensions:** 89 inches high, 47 inches wide, and 25 inches deep.**Functions:** Cooling, dehumidifying, cleaning, and circulating. Heating and humidifying optional.**Cabinet:** Sheet steel with rounded corners, 1/2-inch Airacoustic insulation, walnut Hammeroid finish.**Condensing Unit:** Compressor not included. Shell and Thermek coil.**Blower:** Two 1/2-hp. blowers, 10 inches in diameter.**Air Circulation:** Fresh air intake optional, Uni-flo grille. Room air circulation 1,800 c.f.m.**Cooling Surface:** Copper Thermek.**Heating Surface:** Copper Thermek.**Capacity of Unit:** Cooling capacity varies depending on compressor size. Heating capacity with 5 lbs. steam and 60° F. entering air, 138,000 B.t.u.**Humidification:** Spray type. Capacity, 4.5 g.p.h.**Air Cleaning Medium:** Air-Maze cleanable bronze filter.**Suggested or List Price:** Not given.**Control Equipment:** Thermostat, magnetic liquid solenoid, water regulating valve.**Model WB-75****Dimensions:** 89 inches high, 64 inches wide, and 29 inches deep.**Functions:** Cooling, dehumidifying, cleaning, and circulating. Heating and humidifying optional.**Cabinet:** Electro-galvanized framework and galvanneal sheets, 1/2-inch insulation throughout, maroon finish (prime coat gray optional).**Condensing Unit:** Compressor not included. Sheet and Thermek coil condenser.**Blower:** Two 1-hp. blowers, 14 1/2-inch diameter.**Air Circulation:** Air intake duct connections at filter sections. Room air circulation 3,000 c.f.m.**Cooling Surface:** Copper Thermek.**Heating Surface:** Copper Thermek.**Capacity of Unit:** Cooling capacity varies depending on compressor size. Heating capacity with 5 lbs. steam and 60° F. entering air, 294,000 B.t.u.**Humidification:** Spray type. Capacity, 9 g.p.h.**Air Cleaning Medium:** Throwaway-Walton.**Suggested or List Price:** Not given.**Control Equipment:** Water regulating valve, magnetic liquid solenoid.

Peerless Store Cooler.

throughout, maroon finish (prime coat gray optional).

Condensing Unit: Compressor not included. Sheet and Thermek coil condenser.**Blower:** Two 1-hp. blowers, 14 1/2-inch diameter.**Air Circulation:** Air intake duct connections at filter sections. Room air circulation 3,000 c.f.m.**Cooling Surface:** Copper Thermek.**Heating Surface:** Copper Thermek.**Capacity of Unit:** Cooling capacity varies depending on compressor size. Heating capacity with 5 lbs. steam and 60° F. entering air, 294,000 B.t.u.**Humidification:** Spray type. Capacity, 9 g.p.h.**Air Cleaning Medium:** Throwaway-Walton.**Suggested or List Price:** Not given.**Control Equipment:** Water regulating valve, magnetic liquid solenoid.**Model WB-100****Dimensions:** 89 inches high, 64 inches wide, and 29 inches deep.**Functions:** Cooling, dehumidifying, cleaning, and circulating. Heating and humidifying optional.**Cabinet:** Electro-galvanized framework and galvanneal sheets, 1/2-inch insulation throughout, maroon finish (prime coat gray optional).**Condensing Unit:** Compressor not included. Sheet and Thermek coil condenser.**Blower:** Two 1-hp. blowers, 14 1/2-inch diameter.**Air Circulation:** Air intake duct connections at filter sections. Room air circulation 4,000 c.f.m.**Cooling Surface:** Copper Thermek.**Heating Surface:** Copper Thermek.**Capacity of Unit:** Cooling capacity varies depending on compressor size. Heating capacity with 5 lbs. steam and 60° F. entering air, 393,000 B.t.u.**Humidification:** Spray type. Capacity, 9 g.p.h.**Air Cleaning Medium:** Throwaway-Walton.**Suggested or List Price:** Not given.**Control Equipment:** Automatic water regulating valve, magnetic liquid solenoid.**Model WB-150****Dimensions:** 81 inches high, 75 inches wide, and 76 inches deep.**Functions:** Cooling, dehumidifying, cleaning, and circulating. Heating and humidifying optional.**Cabinet:** Electro-galvanized framework and galvanneal sheets, 1/2-inch insulation throughout, maroon finish (prime coat gray optional).**Condensing Unit:** Compressor not included. Sheet and Thermek coil condenser.**Blower:** Two 1 1/2-hp. blowers, 16 1/4-inch diameter.**Air Circulation:** Air intake duct connections at filter sections. Grille not included. Room air circulation 6,000 c.f.m.**Cooling Surface:** Copper Thermek.**Heating Surface:** Copper Thermek.**Capacity of Unit:** Cooling capacity varies depending on compressor size. Heating capacity with 5 lbs. steam and 60° F. entering air, 589,000 B.t.u.**Humidification:** Spray type. Capacity, 18 g.p.h.**Air Cleaning Medium:** Throwaway-Walton.**Suggested or List Price:** Not given.**Control Equipment:** Thermal expansion valves, automatic water regulating valve, magnetic liquid solenoid.

Carrier Corp.

Model 50G Room Cooler

Dimensions: 33 inches high, 32 inches wide, 16 1/2 inches deep.**Functions:** Cooling, dehumidifying, cleaning, circulating. Heating optional.**Cabinet:** Pressed steel, insulated cabinet, two-tone walnut grain finish.**Condensing Unit:** Carrier 1/2-hp. "Freon-12" compressor.**Blower:** Multi-blade forward-curved type driven at 110 r.p.m. by a 1/40-hp. motor.**Air Circulation:** Air intake at end, air discharge on top through adjustable air directors. Air intake provided, with selector switch to permit 100% fresh air.**Room Air Circulation:** 300 c.f.m.**Cooling Surface:** Fanned copper tubes.**Heating Surface:** Electric heater insert.**Capacity of Unit:** 8,250 B.t.u., based on room temperature of 80° F. dry bulb, and 67° F. wet bulb, and 95° F. outdoor dry bulb.**Air Cleaning Medium:** Glass fiber filter.**Suggested Price:** Not given.**Control Equipment:** Dual compressor and fan control switch.

Model 50M3 Store Cooler

Dimensions: 83 1/2 inches high, 37 1/2 inches wide, and 20 1/4 inches deep.**Functions:** Cooling, dehumidifying, cleaning, and circulating. Heating and humidifying optional.**Cabinet:** 18-gauge steel, walnut brown smooth finish, bronze trimming. Insulated bottom.**Condensing Unit:** Carrier 3-hp. 2-cylinder "Freon-12" compressor driven at 1,750 r.p.m. Thermostatic control.**Blower:** Two double inlet fans, 8 1/2-inch diameter, driven by a 1/4 and 1/2-hp. motor, respectively.**Air Circulation:** Air intake at front center, air discharge at front near top. Fresh air intake optional. Room air circulation 1,100 c.f.m.**Cooling Surface:** Copper tubes, aluminum fins.**Capacity of Unit:** 36,000 B.t.u. with entering air at 80° F. dry bulb, 67° F. wet bulb.

Carrier 5-Ton Store Cooler.

Humidification: Pan evaporative type humidifier.**Air Cleaning Medium:** Throw-away type filter.**Suggested List Price:** Not given.**Control Equipment:** Thermostat and manual 3-position switch.

Model 50M4 Store Cooler

Similar to Model 50M3 but cooling capacity is 42,200 B.t.u., and air delivery is 1,320 c.f.m.

Model 50M5 Store Cooler

Dimensions: 90 inches high, 47 1/2 inches wide, and 20 1/4 inches deep.**Functions:** Cooling, dehumidifying, cleaning, and circulating. Heating and humidifying optional.**Cabinet:** Same as Model 50M3.**Condensing Unit:** Carrier 5-hp. 4-cylinder compressor driven at 1,750 r.p.m. Thermostatic control.**Blower:** Three double inlet fans, driven at 1,725 r.p.m. by 1/2 and 1/2-hp. motors.**Air Circulation:** Air intake at front center, air discharge at front near top. Fresh air intake optional. Room air circulation 1,800 c.f.m.**Cooling Surface:** Copper tubes, aluminum fin.**Capacity of Unit:** 60,000 B.t.u. with entering air at 80° F. dry bulb, 67° F. wet bulb.**Humidification:** Pan evaporative type humidifier.**Air Cleaning Medium:** Throw-away type filter.**Suggested List Price:** Not given.**Control Equipment:** Thermostat and manual 3-position switch.

Model 50M6

Similar to Model 50M5, but cooling capacity is 73,000 B.t.u., and air delivery is 2,200 c.f.m.

Model 41Q2 Self-Contained Conditioner

Dimensions: 72 1/2 inches high, 58 1/2 inches wide, and 21 inches deep.**Functions:** Cooling, dehumidifying, cleaning, and circulating. Heating and humidifying optional.**Cabinet:** Heavy pressed steel and pans welded to structural members and side sheets. Internally insulated.**Condensing Unit:** Carrier 5-hp. 4-cylinder "Freon-12" compressor driven at 1,750 r.p.m. Pressure control.**Blower:** Double inlet, centrifugal type. Motors driven at 1,750 r.p.m.**Air Circulation:** Air intake at front or rear center, air discharge at top. Fresh air intake optional. Room air circulation 2,000 c.f.m.**Cooling Surface:** Four and 6-row Aerofin copper finned coils.**Capacity of Unit:** 5 tons, nominal rating.**Humidification:** Pan type humidifier.**Air Cleaning Medium:** Throw-away filters, located in filter boxes at side of unit.**Suggested or List Price:** Not given.**Control Equipment:** Dual pressurestat, water regulator.

Models 41Q3, 41Q6, 41Q7

Models 41Q3, 41Q6, 41Q7. Similar in design to Model 41Q2, except that Model 41Q3 is 76 inches high, 83 1/2 inches wide, and 28 inches deep, uses a 7 1/2-hp. compressor, has a nominal rating of 7 1/2 tons, and an air delivery of 3,000 c.f.m. Model 41Q6 is 83 inches high, 76 1/2 inches wide, and 28 inches deep, uses two 5-hp. compressors, has a nominal rating of 10 tons, and an air delivery of 4,000 c.f.m. Model 41Q7 is 83 inches high, 102 1/2 inches wide, and 28 inches deep, has two 7 1/2-hp. compressors, a nominal rating of 15 tons, and air delivery of 6,000 c.f.m.

Capacity of Unit: 186,000 B.t.u. with entering air at 80° F. dry bulb, 67° F. wet bulb.**Air Cleaning Medium:** All metal filters.**Suggested or List Price:** Not given.**Control Equipment:** Thermostat, control switch.**Model WB-30****Dimensions:** 86 inches high, 35 inches wide, and 22 inches deep.**Functions:** Cooling, dehumidifying, cleaning, and circulating. Heating and humidifying optional.**Cabinet:** Sheet steel with rounded corners, 1/2-inch Airacoustic insulation, walnut Hammeroid finish.**Condensing Unit:** Compressor not included. Shell and Thermek coil condenser.**Blower:** One 1/2-hp. blower, 10 inches in diameter.**Air Circulation:** Fresh air intake optional, Uni-flo grille. Room air circulation 1,200 c.f.m.**Cooling Surface:** Copper Thermek.**Heating Surface:** Copper Thermek.**Capacity of Unit:** Cooling capacity varies depending on compressor size. Heating capacity with 5 lbs. steam and 60° F. entering air, 91,500 B.t.u.**Humidification:** Spray type. Capacity, 4.5 g.p.h.**Air Cleaning Medium:** Air-Maze cleanable bronze filter.**Suggested or List Price:** Not given.**Control Equipment:** Thermostat, magnetic liquid solenoid, water regulating valve.**Model WB-50****Dimensions:** 89 inches high, 47 inches wide, and 25 inches deep.**Functions:** Cooling, dehumidifying, cleaning, and circulating. Heating and humidifying optional.**Cabinet:** Sheet steel with rounded corners, 1/2-inch Airacoustic insulation, walnut Hammeroid finish.**Condensing Unit:** Compressor not included. Shell and Thermek coil.**Blower:** Two 1/2-hp. blowers, 10 inches in diameter.**Air Circulation:** Fresh air intake optional, Uni-flo grille. Room air circulation 1,800 c.f.m.**Cooling Surface:** Copper Thermek.**Heating Surface:** Copper Thermek.**Capacity of Unit:** Cooling capacity varies depending on compressor size. Heating capacity with 5 lbs. steam and 60° F. entering air, 138,000 B.t.u.**Humidification:** Spray type. Capacity, 4.5 g.p.h.**Air Cleaning Medium:** Air-Maze cleanable bronze filter.**Suggested or List Price:** Not given.**Control Equipment:** Thermostat, magnetic liquid solenoid, water regulating valve.**Model WB-75****Dimensions:** 89 inches high, 64 inches wide, and 29 inches deep.**Functions:** Cooling, dehumidifying, cleaning, and circulating. Heating and humidifying optional.**Cabinet:** Electro-galvanized framework and galvanneal sheets, 1/2-inch insulation throughout, maroon finish (prime coat gray optional).**Condensing Unit:** Compressor not included. Sheet and Thermek coil condenser.**Blower:** Two 1-hp. blowers, 14 1/2-inch diameter.**Air Circulation:** Air intake duct connections at filter sections. Room air circulation 3,000 c.f.m.**Cooling Surface:** Copper Thermek.**Heating Surface:** Copper Thermek.**Capacity of Unit:** Cooling capacity varies depending on compressor size. Heating capacity with 5 lbs. steam and 60° F. entering air, 294,000 B.t.u.**Humidification:** Spray type. Capacity, 9 g.p.h.**Air Cleaning Medium:** Throwaway-Walton.**Suggested or List Price:** Not given.**Control Equipment:** Water regulating valve, magnetic liquid solenoid.**Model WB-100****Dimensions:** 89 inches high, 64 inches wide, and 29 inches deep.**Functions:** Cooling, dehumidifying, cleaning, and circulating. Heating and humidifying optional.**Cabinet:** Electro-galvanized framework and galvanneal sheets, 1/2-inch insulation throughout, maroon finish (prime coat gray optional).**Condensing Unit:** Compressor not included. Sheet and Thermek coil condenser.**Blower:** Two 1-hp. blowers, 14 1/2-inch diameter.**Air Circulation:** Air intake duct connections at filter sections. Room air circulation 4,000 c.f.m.**Cooling Surface:** Copper Thermek.**Heating Surface:** Copper Thermek.**Capacity of Unit:** Cooling capacity varies depending on compressor size. Heating capacity with 5 lbs. steam and 60° F. entering air, 393,000 B.t.u.**Humidification:** Spray type. Capacity, 9 g.p.h.**Air Cleaning Medium:** Throwaway-Walton.**Suggested or List Price:** Not given.**Control Equipment:** Automatic water regulating valve, magnetic liquid solenoid.**Model WB-150****Dimensions:** 81 inches high, 75 inches wide, and 76 inches deep.**Functions:** Cooling, dehumidifying, cleaning, and circulating. Heating and humidifying optional.**Cabinet:** Electro-galvanized framework and galvanneal sheets, 1/2-inch insulation throughout, maroon finish (prime coat gray optional).**Condensing Unit:** Compressor not included. Sheet and Thermek coil condenser.**Blower:** Two 1 1/2-hp. blowers, 16 1/4-inch diameter.**Air Circulation:** Air intake duct connections at filter sections. Grille not included. Room air circulation 6,000 c.f.m.**Cooling Surface:** Copper Thermek.**Heating Surface:** Copper Thermek.**Capacity of Unit:** Cooling capacity varies depending on compressor size. Heating capacity with 5 lbs. steam and 60° F. entering air, 589,000 B.t.u.**Humidification:** Spray type. Capacity, 18 g.p.h.**Air Cleaning Medium:** Throwaway-Walton.**Suggested or List Price:** Not given.**Control Equipment:** Thermal expansion valves, automatic water regulating valve, magnetic liquid solenoid.

The Nation's BIGGEST BUY in Comfort Cooling

"NEVER LOSE A SALE"

Frigidaire (Cont.)

(Concluded from Page 10, Column 5)
 rear, or center; air discharge at top through adjustable vane-type outlet. Fresh air intake optional. Room air circulation 2,000 c.f.m.

Cooling Surface: Frigidaire multipath type.

Capacity of Unit: Not given.

Air Cleaning Medium: Double viscous coated type filter.

Suggested or List Price: Not given.

Control Equipment: Thermostatic control, on-and-off switch.

Model SC-1000

Dimensions: 66½ inches high, 72 inches wide, 35 inches deep.

Functions: Cooling, dehumidifying, cleaning, circulating. Heating optional.

Cabinet: Heavy sheet steel with angle iron reinforcements.

Condensing Unit: Frigidaire 10-hp. 4-cylinder "Freon-12" compressor. Pressure control.

Blower: Two double inlet multiblade centrifugal blowers, 12 inches in diameter, driven by fans of ¾ to 1½-hp. range.

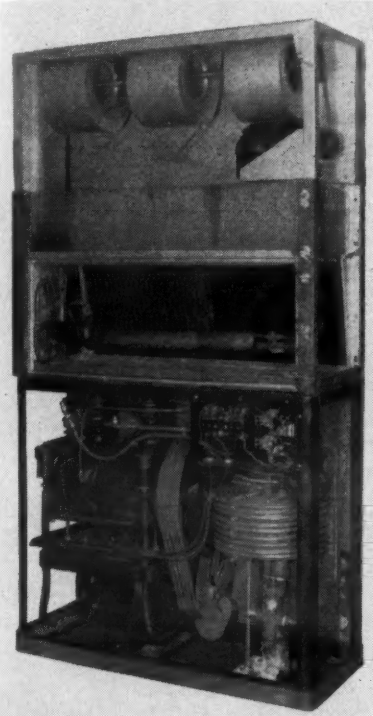
Air Circulation: Air intake at front or rear, air discharge at top. Fresh air intake optional. Room air circulation 4,000 c.f.m.

Cooling Surface: Frigidaire multipath cooling unit.

Capacity of Unit: Not given.

Air Cleaning Medium: Six replaceable filters.

Suggested or List Price: Not given.



"Insides" of a General Refrigeration Store Cooler.

General Refrigeration Corp.**Model CR75A Room Cooler**

Dimensions: 43 inches high, 33 inches wide, and 19 inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating.

Cabinet: Walnut moisture-proofed plywood finished in synthetic lacquer.

Condensing Unit: General Refrigeration ¾-hp. 2-cylinder "Freon-12" compressor driven at 400 r.p.m. Manual control.

Blower: Multi-blade centrifugal blower driven by ¼-hp. motor at 1,000 r.p.m.

Air Circulation: Air intake at bottom, air discharge at top through adjustable-type grille. Fresh air intake. Room air circulation, 330 c.f.m.

Cooling Surface: Copper fins on copper tubes.

Capacity of Unit: 8,000 B.t.u. (No conditions specified.)

Air Cleaning Medium: Throw-away type.

Suggested or List Price: Not given.

Control Equipment: Control switch.

Model CR100A Room Cooler

Dimensions: 43 inches high, 33 inches wide, 19 inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating. Heating optional.

Cabinet: Walnut moisture-proofed plywood finished in synthetic lacquer.

Condensing Unit: General Refrigeration 1-hp. 2-cylinder "Freon-12" compressor driven at 520 r.p.m. Thermostatic control.

Blower: Multi-blade centrifugal blower driven by ¼-hp. motor at 1,000 r.p.m.

Air Circulation: Air intake at bottom, air discharge at top through adjustable-type grille. Fresh air intake. Room air circulation, 330 c.f.m.

Cooling Surface: Copper fins on copper tubes.

Capacity of Unit: 10,400 B.t.u. (No conditions specified.)

Air Cleaning Medium: Throw-away type filters.

Suggested or List Price: Not given.

Control Equipment: Control switch.

Model CR200W (Store Cooler Type)

Dimensions: 95½ inches high, 32¼ inches wide, 18¾ inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating. Heating and humidifying optional.

Cabinet: Welded steel frame, walnut metallic enamel finish.

Condensing Unit: General Refrigeration 2-hp. 2-cylinder "Freon-12" compressor driven at 385 r.p.m. Thermostatic control.

Blower: Two centrifugal-type blowers, 7½ inches in diameter, driven by ¼-hp. motor.

Air Circulation: Air intake at front center, air discharge at front top through adjustable grilles. Fresh air intake.

Room air circulation: 600-1,000 c.f.m.

Cooling Surface: Copper fins on copper tubes.

Capacity of Unit: 28,000 B.t.u. at inlet air temperature of 80° F. dry bulb, 67° F. wet bulb.

Air Cleaning Medium: Double wool felt-type filter.

Suggested or List Price: Not given.

Control Equipment: Three-position switch, adjustable thermostat.

Model CR300W Store Cooler

Dimensions: 95½ inches high, 32¼ inches wide, 18¾ inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating. Heating and humidifying optional.

Cabinet: Welded steel frame, walnut metallic enamel finish.

Condensing Unit: General Refrigeration 3-hp. 2-cylinder "Freon-12" compressor driven at 590 r.p.m. Thermostatic control.

Blower: Two centrifugal-type blowers, 7½ inches in diameter, driven by ¼-hp. motor.

Air Circulation: Air intake at front center, air discharge at front top through adjustable grilles. Fresh air intake.

Room air circulation: 800-1,500 c.f.m.

Cooling Surface: Copper fins on copper tubes.

Capacity of Unit: 37,000 B.t.u. at 80° F. dry bulb inlet air, 67° F. wet bulb.

Air Cleaning Medium: Double wool felt-type filter.

Suggested or List Price: Not given.

Control Equipment: Three-position switch, adjustable thermostat.

Model CR500W Store Cooler

Dimensions: 95½ inches high, 46¼ inches wide, and 18¾ inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating. Heating and humidifying optional.

Cabinet: Welded steel frame, walnut metallic enamel finish.

Condensing Unit: General Refrigeration 5-hp. 4-cylinder "Freon-12" compressor driven at 590 r.p.m. Thermostatic control.

Blower: Three centrifugal-type blowers, 7½ inches in diameter, driven by ½-hp. motor.

Air Circulation: Air intake at front center, air discharge at front top through adjustable grilles. Fresh air intake.

Room air circulation: 1,200-2,000 c.f.m.

Cooling Surface: Copper fins on copper tubes.

Capacity of Unit: 58,000 B.t.u. at 80° F. dry bulb inlet air, 67° F. wet bulb.

Air Cleaning Medium: Double wool felt-type filter.

Suggested or List Price: Not given.

Control Equipment: Three-position switch, adjustable thermostat.

Frick Company**Model 312**

Dimensions: 83 inches high, 40¼ inches wide, and 23¾ inches deep.

Functions: Cooling, dehumidifying, cleaning, and circulating. Space provided for two-row steam coil if desired for heating.

Cabinet: Welded steel cabinet with sound-absorbing material throughout, exterior finish in blue-gray Roxylin with stainless steel trim.

Condensing Unit: Frick 3-hp. 2-cylinder "Freon-12" compressor operating at 650 r.p.m. Thermostatic control.

Blower: Squirrel-cage type driven at variable speeds by ¼-hp. motor.

Air Circulation: Air intake at front center, discharge at top through grilles with vanes that can be adjusted to direct the air in any direction desired. Fresh air intake at rear or either side. Volume of air circulated, 900-1,300 c.f.m. depending on blower speed.

Cooling Surface: Four rows of ¾-inch finned copper tubes.

Heating Surface: Optional.

Capacity of Unit: Not given.

Air Cleaning Medium: Filter with drainage pan.

Suggested or List Price: Not given.

Control Equipment: Alco thermostatic expansion valve, water regulating valve, thermostat, three-way selector control switch ("cool," "fan," and "off" positions).

Model 518

Dimensions: 83 inches high, 42¼ inches wide, and 26¾ inches deep.

Functions: Same as Model 312.

Cabinet: Same as Model 312.

Condensing Unit: Frick 5-hp. 3-cylinder "Freon-12" compressor driven at 435 r.p.m. with thermostatic control.

Blower: Squirrel-cage type driven by ½-hp. motor.

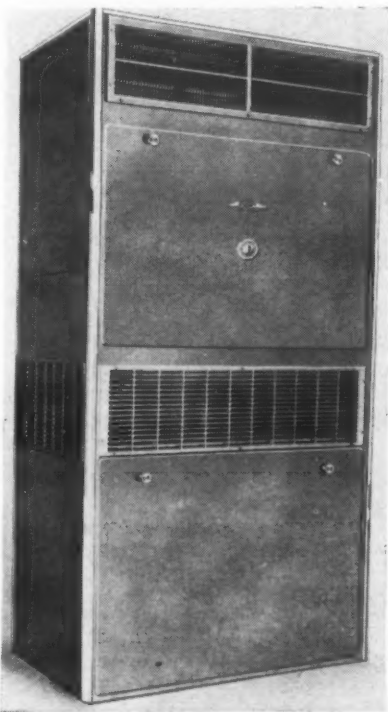
Air Circulation: Same as Model 312 except total air delivered ranges from 1,200 to 1,800 c.f.m.

Cooling Surface: Same as Model 312.

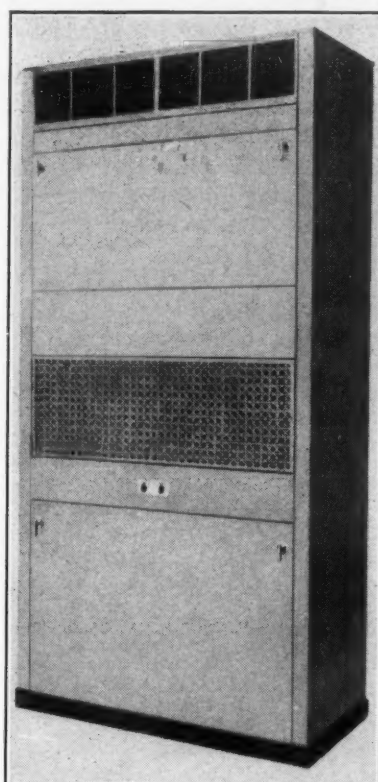
Capacity of Unit: Not given.

Air Cleaning Medium: Same as Model 312.

Control Equipment: Same as Model 312.



Frick Store Conditioner.



Nevinger Store Cooler.

Nevinger Mfg. Co., Inc.**Nevco-Aire Model W-50**

Dimensions: 15 inches high, 26 inches wide, and 25 inches deep.

Functions: Cooling, dehumidifying, cleaning, circulating. Heating optional.

Cabinet: Automobile body steel, insulated with ½-inch Celotex QT duct-liner. Hammerloid finish.

Condensing Unit: Servel ½-hp. 2-cylinder "Freon-12" compressor driven at 600 r.p.m.

Blower: Maurey blower, 10-inch blade, driven by 1½-hp. motor.

Air Circulation: Air intake at both sides, air discharge at front center through Barber-Colman uniflow. Fresh air intake. Room air circulation 225 c.f.m.

Cooling Surface: Copper tube, aluminum fins. Surface area, 30 sq. ft.

Capacity of Unit: 5,200 B.t.u. based on 105° F. condensing temperature.

Air Cleaning Medium: Walton fiber-type filter.

Suggested or List Price: \$185.00.

Control Equipment: Switch.

Nevco-Aire Model FW-50

Dimensions: 42 inches high, 37 inches wide, and 18 inches deep.

Functions: Cooling, dehumidifying, cleaning, circulating. Heating optional.

Cabinet: Same as previous model.

Condensing Unit: Servel ½-hp. 2-cylinder "Freon-12" compressor driven at 600 r.p.m.

Blower: Torrington blower, 6-inch diameter, driven by ½-hp. motor.

Air Circulation: Air intake at right side, air discharge at top through Barber-Colman uniflow grille. Fresh air intake. Room air circulation 225 c.f.m.

Cooling Surface: Copper tube, aluminum fins. Surface area, 40 sq. ft.

Capacity of Unit: 5,800 B.t.u. at 105° F. condensing temperature.

Suggested or List Price: \$265.00.

Control Equipment: Thermostat, solenoid valve.

Nevco-Aire Model FW-100

Dimensions: 42 inches high, 37 inches wide, and 18 inches deep.

Functions: Cooling, dehumidifying, cleaning, circulating. Heating optional.

Cabinet: Same as previous model.

Condensing Unit: Servel 1-hp. 4-cylinder "Freon-12" compressor, driven at 600 r.p.m.

Blower: Torrington blower, 6-inch diameter with ½-hp. motor.

Air Circulation: Air intake at right side, air discharge at top through Barber-Colman uniflow grille. Fresh air intake. Room air circulation 375 c.f.m.

Cooling Surface: Copper tube, aluminum fins. Surface area, 60 sq. ft.

Capacity of Unit: 10,300 B.t.u. based on 105° F. condensing temperature.

Suggested or List Price: \$325.00.

Control Equipment: Thermostat, solenoid valve.

Nevco-Aire Model AIO-3

Dimensions: 88 inches high, 34 inches wide, and 22 inches deep.

Functions: Cooling, dehumidifying, cleaning, circulating. Heating optional.

Cabinet: Same as previous model.

Condensing Unit: Servel 3-hp. 4-cylinder "Freon-12" compressor driven at 1,060 r.p.m.

Blower: Lau blower, 10½-inch diameter, driven by ½-hp. motor.

Air Circulation: Air intake at front, air discharge at front top through Tuttle & Bailey louvered grille. Fresh air intake. Room air circulation 1,275 c.f.m.

Cooling Surface: Copper tube, aluminum fins. Surface area of 215 sq. ft.

Capacity of Unit: 36,000 B.t.u. based on 105° F. condensing temperature.

Suggested or List Price: \$750.00.

Control Equipment: Solenoid valve, thermostat, water regulating valve.

Nevco-Aire AIO-5

Dimensions: 92 inches high, 44 inches wide, and 22 inches deep.

Functions: Cooling, dehumidifying, cleaning, circulating. Heating optional.

Cabinet: Same as previous model.

Condensing Unit: Servel 5-hp. 4-cylinder "Freon-12" compressor driven at 1,060 r.p.m.

Blower: Lau blower, 12½-inch diameter, driven by ½-hp. motor.

Air Circulation: Air intake at front, air discharge at front top through Tuttle & Bailey louvered grille. Fresh air intake. Room air circulation 2,100 c.f.m.

Cooling Surface: Copper tube, aluminum fins. Surface area, 335 sq. ft.

Capacity of Unit: 60,000 B.t.u. based on 105° F. condensing temperature.

Air Cleaning Medium: Walton expanded fiber-type filters.

Suggested or List Price: \$775.00.

Control Equipment: Solenoid valves, thermostat, water regulating valve.

Model AIO-7½: Similar to AIO-5, except it has 2 blowers providing 3,200 c.f.m., and a 7½-hp. compressor with 90,000 B.t.u. capacity.

Model AIO-10: Has 2 blowers providing 4,200 c.f.m. and a 10-hp. unit with 120,000 B.t.u. capacity.

**Leading Makers
of Unit Air Conditioners
Standardize on
ALCO Thermo Valves!**

Here is striking proof of the industry's recognition of the accuracy and dependability of Alco Thermo Valves — for among their hundreds of users are the leading manufacturers of unit air conditioners illustrated above.

Alco Thermo Valves are carefully engineered, precision manufactured and thoroughly tested under all possible operating conditions. By increasing the efficiency of the evaporator they save money in both installation and operating costs — contribute much to improve the performance of any unit.

The experience of Alco engineers is second to none in the entire field of refrigerant control. Their recommendation as to the correct application of Alco Valves to any installation is always available to you. Write today.

ALCO VALVE COMPANY
2620 Big Bend Blvd. • St. Louis, Mo.

Engineered Refrigerant Controls
FOR HIGHEST EVAPORATOR EFFICIENCY

York Ice Machinery Corporation
General Electric Company
Typhoon Air Conditioning Co., Inc.
Chrysler Corporation — Airtemp Division
Curtis Refrigerating Machine Company
York Ice Machinery Corporation

AIR CONDITIONING & REFRIGERATION NEWS

Trade Mark registered U. S. Patent Office:
Established 1926 and registered as
Electric Refrigeration News

Published Every Wednesday by
BUSINESS NEWS PUBLISHING CO.
5229 Cass Ave., Detroit, Mich.
Telephone Columbia 4242

Subscription Rates
U. S. and Possessions, Canada, and all
countries in the Pan-American Postal
Union: \$4.00 per year; 2 years for \$7.00.
All other foreign countries: \$6.00 per year.
Single copy price, 20 cents. Ten or more
copies, 15 cents each; 50 or more copies,
10 cents each. Send remittance with order.

F. M. COCKRELL, Publisher

GEORGE F. TAUBENECK, Editor
PHIL B. REDEKER, Managing Editor
THEODORE T. QUINN, Assistant Editor
Staff Reporters: JAMES McCALLUM,
HENRY KNOWLTON, JR., and
ROBERT M. PRICE

R. T. CARRITHERS, Advertising Mgr.
JAMES B. SMITH, Asst. Adv. Mgr.

JOHN R. ADAMS, Business Manager
LOLA E. DEW, Subscription Manager

Member, Associated Business Papers
Member, Audit Bureau of Circulations

VOL. 30, No. 1, SERIAL No. 580
MAY 1, 1940

Copyright, 1940, Business News Pub. Co.

Apathy Among Dealers

APLIANCE DEALERS on the whole have been singularly unsuccessful at selling air conditioning units thus far, declares the air conditioning sales manager of one of the nation's prominent electrical appliance manufacturing organizations. In fact, his concern is even now contemplating the abandonment of the air conditioning field because of the failure of its dealers to obtain any sort of volume on packaged air conditioning.

Two of this firm's dealers sold 90% of the company's total volume last year, he reports! But they were firms which are strong in commercial refrigeration, rather than the washer-cleaner-radio-refrigerator-range type of outlet.

Mortality Rate High Among Specialty Dealers

This particular sales manager has not given up on the appliance dealer as a potential mover of air conditioning units in great volume. But he is discouraged for the present.

"Specialty dealers, of the type that put radio and household refrigeration across, are a vanishing breed," he declares. "They are succumbing more and more to the competition of the big chain, furniture, and department stores. And many of those that do remain have been degenerating into mere cut-price outlets at worst, or dickering, ordering-taking dealers at best.

Unit Air Conditioning Needs Pioneering

"What the packaged air conditioning business needs is a revival of the specialty selling type of dealer who flourished in the decade from 1925 to 1935. Packaged air conditioning needs pioneering. But the pioneering dealers are few and far between these days.

"Scattered here and there over the country are a few really good air conditioning dealers. They have made genuine inroads into the market, and have built for themselves a profitable business. But there aren't enough of them around to provide adequate dis-

tribution for even one manufacturer, let alone an entire industry."

It does seem true that the so-called specialty dealers, in the mass, have lost their yen for pioneering. Breaking the ice for a new appliance takes outside salesmen, and outside salesmen are scarce in the appliance business these days. Pioneering also requires a high order of sales training and sales supervision—two other phases of the business which have been neglected in too many quarters during the last couple of years.

Commercial Refrigeration Dealer Is Best Bet

At present the commercial refrigeration dealer seems to be the most promising type of dealership for up-to-1-ton unit air conditioners. Commercial refrigeration is an active business, and it still depends upon a high type of specialty salesmanship. Nobody can walk into a chain store or a department store today and pick up a beverage cooler or a display case. Items like that are sold, not bought.

Furthermore, commercial refrigeration salesmen, like commercial refrigeration dealers, can be taught the air conditioning sales story more easily than any other group, experience has shown. They already have a big head start, in their knowledge of refrigeration, and their familiarity with estimating.

One should not count out appliance dealers *in toto*, however. Here and there you will find a good one of the now old-fashioned variety who still believes in maintaining a force of specialty salesmen, and sending them out to call on prospects. Entrepreneurs of this sort get more fun out of pioneering a new product than anything else in the world; and what's more, they know they can make money at it.

Air Conditioning In Time of War

ASUBSCRIBER who requests us not to publish his letter confides that he is seriously upset over the possibilities of poison gas being introduced into air conditioning systems in times of war.

Suppose gas were introduced into a system in a large theater, auditorium, or store, he wonders. Wouldn't a panic result, or even the loss of hundreds of lives? If this be the case, manufacturers should get busy at once on special filters to keep all poisonous gases from entering the fresh air intake.

"I am not in a position to handle this thing myself, so I thought it a good idea to mention it to the NEWS," he says. "I am sure the NEWS is as much interested in mankind as I am. It may be that you have already done something about it. If so, more power to you."

Air Conditioning Sold In Europe As Safeguard

Yes, the NEWS has already discussed this matter—but from an entirely different viewpoint. In the "Around the World" dispatches sent back by the editor in 1936, it was reported that air conditioning installations were being sold in Europe as a safeguard against gas attacks.

Poisonous gases used thus far

in warfare (none has been employed to date in the current European mess) are heavier than air, and hug the ground. A fresh air intake located on the roof of a building two or more stories high should bring unpolluted air into the air conditioning system—and, if the building is closed reasonably tight, the occupants should be able to breathe in a relatively pure atmosphere. (At least, that's what European air conditioning firms were claiming at the time of the editor's visit.)

True, not all fresh air intakes are located two stories high in this country. That's something which undoubtedly should be—and would be—attended to in the remote case of America's invasion by a foreign power. But it wouldn't be too hard to do.

On page 16 of this issue is a report of the Badoni-Guarini air conditioner, made in Italy, which "drowns" poisonous gases in its air washer. Both chloric and phosgene gases become ineffective in a rain, and are absorbed even more rapidly in water of low temperature.

Auditoriums Would Be Empty At Time of Invasion

There is also the remote possibility that invaders could, in wartime, drag a cylinder or two of mustard gas up to an air intake, and release it into a system. That, too, seems unlikely. It would be much simpler to bomb the place. Nor does it seem likely that any auditorium or theater would be occupied by a large number of people during an enemy invasion.

So the premise on which air conditioning installations were occasionally being sold in Europe from 1936 on would still seem to hold: that air conditioning is a sound precaution against poison gas.

Subject Is Open For Thorough Discussion

The NEWS will be interested to learn—in case poison gas does become a factor in the European war—how well air conditioned buildings withstood such attacks. Or, if any engineers over here have any theory to contribute to the discussion, that will be welcomed, too.

They'll Do It Every Time . . . By Jimmie Hatlo



Science and engineering have made modern war horrible beyond compare. But perhaps science and engineering can also contribute to the alleviation or nullification of the fiendish schemes for destruction which have already been devised.

LETTERS

Used Refrigerator Reconditioning

Donaldson Refrigeration Co.
2716 McGee Trafficway
Kansas City, Mo.

Editor:

We are very desirous of obtaining a copy of your publication issued about March of 1939 wherein you discussed the reconditioning of used refrigerators in the City of Philadelphia.

We understand that this operation is being conducted by the Associated Refrigerator Plant, Inc. and that several subsequent articles have been issued concerning their operation and success.

Will you please supply us immediately with a copy of your publication pertaining to this subject? We will be more than pleased to pay whatever expense is involved.

C. W. DONALDSON

Answer: The story about the plan used for reconditioning used refrigerators in Philadelphia is best covered in two issues—Jan. 11, 1939 and Jan. 10, 1940—of AIR CONDITIONING & REFRIGERATION NEWS. The cost of these issues is 20 cents each.

They Do It Every Time In South Africa, Too

Electron Heaters (Pty.), Ltd.
Princes Street
Port Elizabeth, South Africa

Editor:

On page 22 of AIR CONDITIONING & REFRIGERATION NEWS, of the 10th January, we found a cartoon, "They'll do it every time," by Jimmie Hatlo.

As we consider this cartoon a very good advertisement, and have the intention to reproduce it, we would like to ask you to find out from the "King Features Syndicate, Inc.," who holds the copyright of this cartoon, if they would allow us to reproduce it and use it for advertising purposes, specially to distribute it amongst our customers.

If you should have about 1,000 of this particular cartoon reproduced on post cards, we should be very glad to have these.

ELECTRON HEATERS (PTY.), LTD.
by: Managing Director

Answer: We have referred your request to reprint Jimmy Hatlo's cartoon to King Features Syndicate, and they advise that you contact their South African representative: Mr. Comper Gray, African Publicity Service, 631 Boston House, Strand St., Capetown, South Africa.

Mr. Gray is in a position to make any type of arrangement relative to the publication of the Hatlo cartoon in your territory.

'You Have To Hustle To Get Your Share'

Foley Bros. Dry Goods Co.
Houston, Tex.

Editor:

The reason why I am addressing this letter to you, is because I ordered my subscription from you personally. (You might remember that gangling fellow who came over to you after your speech here?)

Although not on your subscription list in the past because your publication was sent to one of my co-workers I have always looked forward to reading each copy. Now that I am 2,000 miles away from where I came from (the others are still freezing up there) I have no alternative but to subscribe, and gladly! I am well aware of the fact that your publication is well worth your price.

I was very pleased to read how enthusiastic you are over Houston. I am very much surprised half of New England isn't down here, after the letters I sent up there. Business is pretty good, the potential is very good, but competition (same old story) is pretty keen. You certainly have to hustle to get your share.

F. B. LYONS

Business As Usual In Bilbao, Spain

Suministros Frigoríficos, Ltda.
Maris Diaz De Haro, 48 to 50
Bilbao, Spain

Sirs:

Hereby we wish to beg you to renew one of our subscriptions to your review which ends on this month of March, and we do hope that this renewal will arrive to you in time, because really we should be very sorry to miss a number of the AIR CONDITIONING & REFRIGERATION NEWS, which we find so interesting.

For the payment of the net amount of this renewal, we beg you to address yourselves to Messrs. F. Marti & Co. of New York, as we are ordering them to do this payment for us as heretofore.

JEFE DE VENTAS

Bakery Refrigeration

Richard A. Cobb
61 Pierrepont St.
Brooklyn, N. Y.

Editor:

Unfortunately I was not a subscriber to the NEWS until November, 1939, and I missed the three articles written by Mr. Cathcart on the "Use of Refrigeration by the Baker." Will you please send me these issues—I believe they are the Oct. 18, Oct. 25, and Nov. 1, 1939 issues.

At the same time I would also like a copy of "Appliance Selling Today."

You may bill me for this.

RICHARD A. COBB

Locker Storage

Edgecliff Sanitarium
Spokane, Wash.

Sirs:

I have been an interested reader of your weekly, AIR CONDITIONING & REFRIGERATION NEWS for several years and find it a source of much helpful information.

Inclosed find one one dollar bill for which please send me one copy of your Manual "Refrigerated Locker Storage" by Phil B. Redeker.

WM. WRESE

N. Y. Appliance League Fights Court's Ruling In Gas Price Case

NEW YORK CITY—The League of Metropolitan Appliance Dealers, through its counsel, Crichton Clarke, has petitioned for permission to intervene in the U. S. Supreme Court's recent ruling nullifying control of jobbers' prices on patented Ethyl gasoline.

Mr. Clarke, a leader in the movement for price maintenance under fair trade laws, declared in his petition that the Ethyl ruling is contrary to the principles of fair trade legislation and is of "great public and national importance extending beyond the confines of the litigated case in which it has been rendered."

By the decision issued in this case, the petition continued, "the court decrees that the democratic system of relatively independent licensees operating on their own capital shall be supplanted by the plutocratic system of one gigantic patent owner making and dispensing its own product from its own plants, unless that patent owner shall be willing to distribute its product under cut-throat methods of distribution."

Declaring that it took nearly a quarter of a century "for harassed business men to bring about a statutory nullification of (a previous) decision in favor of predatory price cutting," Mr. Clarke's petition asserted that the Ethyl decision "should not impose a generally similar burden upon independent licensees and small producers without their first having an opportunity to be heard. . . ."

Home Town Crowd Sees New Crosley Models In 'Broadway Setting'

CINCINNATI—The largest audience said ever to be assembled in Cincinnati to see a dealer showing of Crosley products gathered last Monday night in the ballroom of the Gibson hotel and saw the Crosley New York show which introduced the new 1940 Crosley electric refrigerators and gas and electric ranges to dealers in Cincinnati and adjacent territory in Ohio, Kentucky, and Indiana.

Staged by a New York company, the show had the speed and sparkle of a Broadway production with girls who possessed ability as well as beauty. It has already been given in New York City, Pittsburgh, Philadelphia, Chicago, and other leading cities. It will be held in some twenty leading cities of the country.

A dinner given by the Crosley Distributing Co. of Cincinnati preceded the show and was attended by 1,029 dealers, salesmen, and their wives.

Refrigeration Men Join In Wichita Good Will Tour

WICHITA, Kan.—Five Wichita refrigeration firms are represented in the Thirty-Third Annual Good Will Tour, which will visit some 41 towns in three days, starting April 29. An air conditioned train will carry the 150 firms taking part in the tour.

Refrigeration firms making the trip include: Cowie Electric Co. (E. S. Cowie, Lee Thorn); General Electric Supply Corp. (George Gruenwald); Graybar Electric Co. (E. F. Linnerman); Southwestern Electric Co. (R. M. Sutton); and Steve Wise Co. (H. S. Wise).

Versatile Dealer Sells Furniture, Drugs--and 750 Refrigerators a Year



M. H. KIRCHBAUM

SIoux CITY, Iowa—Marketing 750 Kelvinator refrigerators or more each year is the remarkable sales record of M. H. Kirchbaum, who operates a combined furniture, drug, and appliance store here.

One side of the store, which is located on the first floor of a downtown hotel building, is devoted exclusively to drugs and soda fountain, while the other side contains a display of refrigerators and furniture.

Mr. Kirchbaum, who is a distributor for Kelvinator and who is proud of the fact that he is a "carload buyer" of household refrigerators, feels that the day of the small appliance dealer is about over. In his opinion, refrigerators should be sold along with other merchandise and that the successful dealer should carry his own paper.

"We made more money out of financing merchandise last year than our total profit on the entire operation," Mr. Kirchbaum said.

The company uses newspaper advertising liberally, but one-fifth of the advertising budget is spent for radio spot announcements. Two full-time salesmen are employed.

Higher-Priced Models Getting Big Play In Galesburg & Pittsburgh

GALESBURG, Ill.—Sales of domestic refrigerators made during the first three months of this year by Berg's Appliance Store, were 71% ahead of sales recorded for a similar period of 1939, according to H. F. Berg, owner. The company handles the Frigidaire line of major appliances.

Mr. Berg reports that in the higher priced units 65% of refrigerators sold have been Frigidaire Cold-Wall models.

PITTSBURGH—Despite the preponderance of advertising emphasizing 6-cu. ft. refrigerators priced from \$99.95 to \$139.95, Anchor Distributing Co. reports that the deluxe model Crosley Shelvadors, priced at \$179.95 and \$199.95, are the season's biggest sellers.

Sheboygan Firm Remodels

SHEBOYGAN, Wis.—The Prange-Geussenhainer Hardware Co. here has remodeled its second floor into a spacious appliance department. Feature of the section is a model Hotpoint kitchen. The firm observed its 35th anniversary in April.

Peoria Firm Specializes In Water-Type Cooling

PEORIA, Ill.—Automatic Equipment Co. opened a new store and display room here in January of this year. E. R. Shanemeyer is president of the firm, which handles the Kelvinator refrigerator line and home laundry equipment, Kisco air circulators, Globe gas ranges, and Goldenrod water-type air conditioning units. In addition, the organization will sell the Kelvinator, Curtis, and General Electric lines of commercial refrigeration and air conditioning.

Personnel of the new organization includes R. Clayton Tate, vice president and sales manager, who was formerly associated with the Marquette Equipment Co., distributor of Kelvinator commercial equipment; Al Schoenhein, who was with the Marquette company and the G-E organization; and C. J. Morrissey, who was also with the Marquette Equipment Co. Both Mr. Shanemeyer and Mr. Tate were at one time associated with the distribution of the Chevrolet automobile in Peoria.

The firm specializes in the sale of cold water air conditioning units and according to Mr. Shanemeyer, some 125 Goldenrod systems are now operating in Peoria. Recent installations include a \$10,000 40-ton job in S. Zold's department store, and a 5-ton system in the Sportsman's Club.

Fire Destroys C. E. Basset's Home and Appliance Store

WOODSVILLE, N. H.—Fire recently destroyed both the appliance store and home of C. E. Basset, local dealer, with loss estimated at \$15,000. A number of refrigerators and radios were destroyed.

27,700 See Cleveland Appliance Exposition

CLEVELAND—Record attendance of 27,700 persons attended the 1940 Food Show and Household Appliance Exposition held recently in the Public Auditorium. Exhibit of Electrical League of Cleveland featured refrigerators and ranges; a number of distributors and dealers also had displays at the show.

Electric range demonstrations were presented in the auditorium of the food show by Mrs. Marguerite Worth and Miss Sarah Harding Hunter, to a total attendance of more than 4,000 Cleveland housewives.

Washington Institute Offers Bonus For Washer Sales

WASHINGTON, D. C.—Bonus offer of \$2 for each washer sale above \$69 featured the spring laundry campaign recently staged by Electric Institute of Washington to boost sales of higher priced units. In addition, salesmen selling a washer for more than \$79 were given a chance to share in prizes of \$500, through pulls at a prize board on which awards ranged from \$1.50 to \$10. One chance was awarded for each sale.

One-day training school for salesmen was offered, including individual personal demonstration.

It's New!

OFFERS LOWER INSTALLATION COST

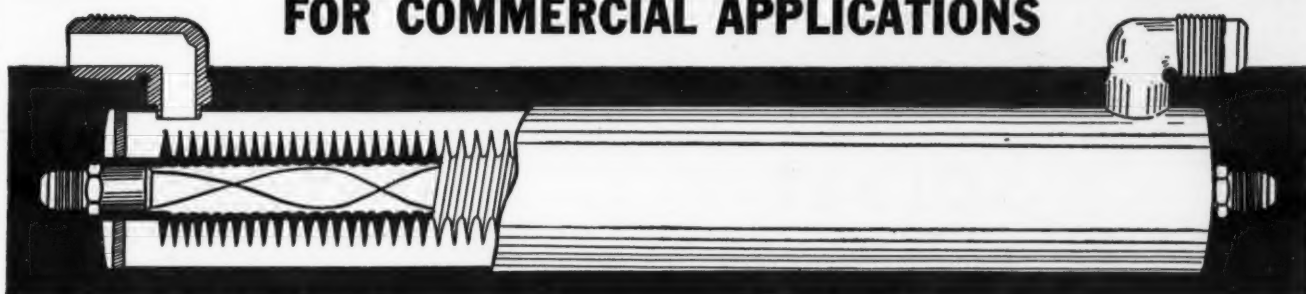
9160 CAPACITY BOOSTER VALVE



SQUARE COMPANY
REGULATOR DIVISION
DETROIT · MICHIGAN

Now! NEW FRIGIDAIRE HEAT INTERCHANGERS

FOR COMMERCIAL APPLICATIONS



Save Money! . . . Increase Efficiency!

Now Frigidaire offers new Heat Interchangers for Commercial applications—low temperature and soda fountain installations, walk-in coolers, meat coolers, forced air evaporators, multiple hook-up on ice cream cabinets and others. Built with the quality materials and engineering genius that has made Frigidaire the greatest name in refrigeration—these Frigidaire Heat Interchangers give you new opportunities to save money and increase operating efficiency.

You get these Outstanding Advantages!

- Use of Greater Evaporator Surface without Frostback
- Elimination of Drier Coil
- Increased Capacity through Interchange of Cold Gas and Warm Liquid
- Compact and Easy to Install
- Fitted with either "Flare" or "Sweat" Connections
- Conductive to High Heat Transfer because of Integral "Fin" Tubing—(Tubing all in 1 piece)



Write your Frigidaire distributor today for prices and full details

A Size for All Applications!

6000 BTU's per hr. (Flare or Sweat Fittings)
Suction Connection Size 3/8"
Liquid Connection Size 3/8"
Tube Length 17"
Tube Diameter 1 1/4"

12000 BTU's per hr. (Flare or Sweat Fittings)
Suction Connection Size 2-3/8" Flare
1-7/8" Sweat
Liquid Connection Size 3/4"
Tube Length 17"
Tube Diameter 2 1/4"

24000 BTU's per hr. (Sweat Fittings)
Suction Connection Size 1 1/2"
Liquid Connection Size 1 1/4"
Tube Length 24"
Tube Diameter 2 3/4"

TO SATISFY YOUR EVERY REFRIGERATION SERVICE NEED



REG. U. S. PAT. OFF.

Artic

REG. U. S. PAT. OFF.



You get the help of Du Pont Research and Technical Assistance with Preferred METHYL CHLORIDE plus Coast-to-Coast Prompt Distribution



E. I. DU PONT DE NEMOURS & COMPANY (INC.)
The R. & H. Chemicals Department
Wilmington, Delaware

District Sales Offices: Baltimore, Boston, Charlotte, Chicago, Cleveland, Kansas City, Newark, New York, Philadelphia, Pittsburgh, San Francisco

New Dealers

ALBANY, N. Y.

ALBANY, N. Y.—Harry Horowitz, automatic heating salesman, has opened his own salesrooms at 266 Washington Ave. under the name of B.T.U. Appliances, Inc. He deals in automatic heating and air conditioning equipment and fuel oil, as well as household appliances.

KENOSHA, WIS.

KENOSHA, Wis.—Vic Joerndt and Vic Andraesen have opened the Radio-Electric Appliance Co. at 2300 63rd St. The firm handles Crosley refrigerators, RCA-Victor radios, Thor washers, and Hamilton-Beach vacuum cleaners.

WYMORE, NEB.

WYMORE, Neb.—E. L. Christlieb has purchased the W. A. Dawson building here, formerly occupied by the Miller Furniture Co., and will open an electrical appliance store.

MINNEAPOLIS, MINN.

MINNEAPOLIS—Conrad Refrigerator Co. has been appointed a dealer for Lipman refrigeration equipment here.

ARLINGTON, VA.

ARLINGTON, Va.—Ellis Radio Sales & Service is the new dealer in Arlington for Philco refrigerators and Thor washers.

MERRILL, WIS.

MERRILL, Wis.—The Economy Boys' store, owned and operated by Melvin Jorns, recently staged its formal opening here. The Gamble store, formerly located at 1005 E. Main St., has moved to new quarters on E. Main St.

CLARKSVILLE, VA.

CLARKSVILLE, Va.—C. H. Russell is a new General Electric dealer here.

WAUKESHA, WIS.

WAUKESHA, Wis.—Frank Reiter and Paul Steinert have opened an electrical appliance store at 143 W. Broadway. The firm handles Gibson refrigerators, ranges, vacuum cleaners, washers, and Westinghouse small appliances.

OMAHA, NEB.

OMAHA, Neb.—A. L. Mahan Refrigerator Sales & Service here has added Philco refrigerators and air conditioning to its lines.

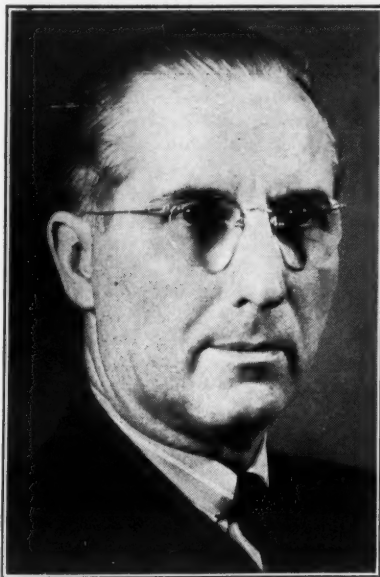
Dime-A-Minute Quiz Has Crosley 'Catch'

SAN ANTONIO, Tex.—A "dime-a-minute" radio quiz program is being used by three San Antonio Crosley dealers—San Antonio Crosley Co., San Antonio Music Co., and Jorrie Furniture Co.—to promote interest in 1940 electric refrigerators.

A microphone is placed at the entrance of one of the city's hotels, and passersby invited to participate. Those accepting the invitations are given five dimes, and asked five questions. For each question answered correctly, the contestant keeps the dime—for each one missed, he returns one, which is given to a local charity. The program is on twice weekly for 15 minutes, during the noon period.

Sales catch in the program is that, of the five questions put to each contestant, at least one refers to the Crosley refrigerator. Listeners to the program are offered \$2.50 for sending in a set of questions. Entry blanks are obtained at sponsoring dealers' display rooms.

Joins Tuthill



HARRY T. KESSLER
Vice president in charge of
Tuthill Pump freezer division.

Promoted By G-E



RAY H. LUEBBE
Named assistant general counsel
of General Electric Co.

Bruck Named Crosley Production Manager

CINCINNATI—A. G. Bruck, who has been connected with refrigerator production of the Crosley Corp. since 1931, has been appointed manager of the production division of the corporation. In his new position, Mr. Bruck has charge of production of all Crosley products.

Mr. Bruck started with Crosley laying out processing schedules and the use of tools and equipment. From this he was given charge of the entire assembly of refrigerator units, and then charge of refrigerator production, including cabinets.

Fillo Leaves White-Rodgers To Sell Wheelco Line

ST. LOUIS—Frank Fillo, formerly with White-Rodgers Electric Co., has resigned to enter the industrial instruments business, and is handling the Wheelco line, manufactured by Wheelco Instrument Co., Chicago.

Stewart-Warner Directors Re-elected

RICHMOND, Va.—Members of the board of directors of Stewart-Warner Corp. were re-elected at the annual meeting of stockholders held here April 10. They are: James S. Knowlson, chairman; Frank A. Ross, Ralph M. Shaw, Irving S. Florsheim, Robert J. Dunham, T. T. Sullivan, and Gardiner Symonds.

More and Better Suggestions Offered By G-E Employees

SCHENECTADY, N. Y.—During the first three months of 1940, General Electric's employee suggestion system paid out 31% more in cash awards to company workers than it did during the corresponding period of 1939. First quarter awards totaled \$17,587 this year, compared to \$13,461 paid out for the first three months of last year.

Number of suggestions received for the period showed a gain of 11%, and the number adopted gained 21%.

Westinghouse Tells Workers How 1939 Income Was Spent

EAST PITTSBURGH, Pa.—Where Westinghouse's 1939 income came from and how it was spent is explained in a special report recently sent to all employees of the company. Among the facts disclosed by it are:

The company received a total of \$176,653,428 from all sources, of which \$68,928,688 was paid out for materials, supplies, fuel, etc. and \$80,916,341 to workers in the form of salaries.

Taxes totaled \$10,390,874, equal to \$3.89 on each share of stock; or, stated another way, \$238 for each employee. Stockholders got \$9,349,421, or \$3.50 a share on stock; \$2,232,763 was set aside for employees in the form of group insurance premiums and annuity trust funds. Balance of \$4,835,521 was put into the reserve fund of the company.

Average number of workers last year was 43,732; their average age was 36.77 years; their average service with Westinghouse, 10.3 years; 78% were men and 22% were women.

MKB Promotions Described In 'Over-All Plan Book'

NEW YORK CITY—The five campaigns—on refrigerators, ranges, water heaters, roasters, and the all-electric kitchen—which make up Modern Kitchen Bureau's complete program for 1940 are presented in an "Over-All Plan Book" recently issued.

The plan book describes each of the four individual appliance campaigns, pictures advertising and promotional materials available, and gives case histories of how individual utilities used the materials in 1939, adapting them to local conditions. Emphasized in the plan book is the method in which the four appliances can be promoted together through the all-electric kitchen program.

G-E 'Special' on Irons Includes Ironing Board

BRIDGEPORT, Conn.—An innovation in home ironing accessories in the form of a new all-metal ironing board is being introduced by the appliance and merchandise department of General Electric Co. in combination with a newly designed "dial the fabric" type of electric iron. The iron has a regular list price of \$8.95 and the "Met-L-Top" ironing board lists at \$5.95, but the two are offered in combination for \$9.95 plus the buyer's old iron.

Los Angeles ASRE Tour Drayer & Hanson Plant

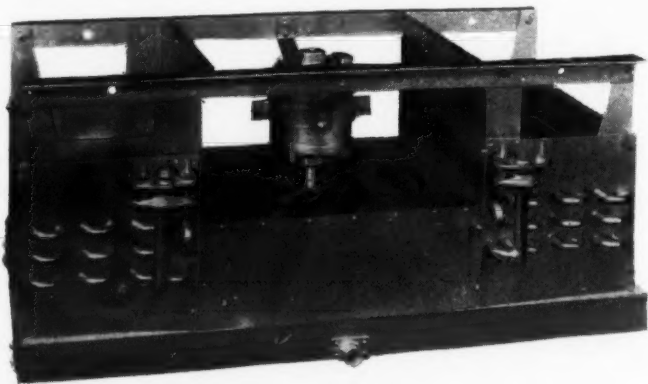
LOS ANGELES—Inspection of the plant of Drayer & Hanson, Inc., manufacturer and fabricator of specially designed finned coils, air conditioning equipment, shell and tube heat exchangers; commercial refrigerators, refrigerated truck bodies, and similar products, featured the April meeting of the Los Angeles section of American Society of Refrigerating Engineers.

Prior to the inspection trip, preliminary talks were given by the firm's staff engineers.

Dorex Exhibit Shows What Odors Look Like

NEW YORK CITY—First display of the recently announced Dorex odor absorbers has been set up at the Architects Samples Corp. here. The "Odorsorber" room unit is shown in operation, and larger units also are displayed.

Sidelight of the display is a container full of the actual liquid stuff that comprises odors when finely dispersed in the air. The units, which employ coconut shell carbon, are made by Dorex division of W. B. Connor Engineering Corp.



SOLVED

THE PROBLEM OF AIR DISTRIBUTION IN CHILL ROOMS

The DOUBLE QUADROFLO dispenses air laterally in all directions.

Adaptable to single or multiple unit installation

Requires only 17½" of space down from ceiling

May be erected over meat racks thus preventing blast that causes shrinkage and discoloration.

Proper baffling prevents air pocket or short circuiting

Assurance of desired relative humidity not a problem

JACKSON ACME INDUSTRIES, INC. MICHIGAN

There's a Knack to Making Good DOOR GASKETS and **Miller** HAS IT !



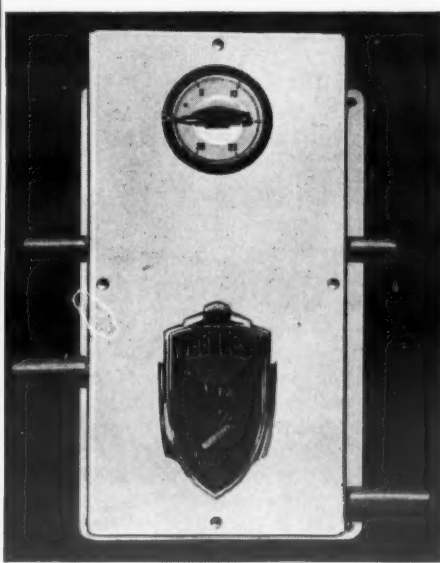
• The "iceless" was in its infancy when Miller first tackled the problem of rubber door gaskets. We've been at it ever since — pioneering new designs and compounds to meet the ever-changing needs of the refrigerator manufacturer. Since each of our replacement door gaskets is an exact duplicate of the original, both in design and quality, doesn't it stand to reason that it is to your advantage as well as the customer's to specify Miller?

You'll find the Miller line complete, too. Its 34 different gasket types enable you to service 80% of all refrigerators regardless of make. Sample card, price list and name of nearest jobber can be obtained by writing—

MILLER RUBBER COMPANY, INC., AKRON, OHIO
"Engineers in Rubber"

KNOCKS FROST

for a SPRING THAW
...Automatically!



Takes the best of all previous methods and combines them into a new unit of amazing efficiency! Just set the dial pointer—automatically the Peerless Frost Buster defrosts the entire coil or plate surface, then starts the compressor on normal operation.

The Frost Buster is available for all Peerless low temperature units and also can be installed on jobs now in operation—a genuine opportunity for modernizing profits. Write the nearest Peerless factory for full instructions.

Peerless FROST BUSTER

Available in two different types; Model W using water as the defrosting medium and Model G using hot gas. See your refrigeration parts jobber.

Peerless of AMERICA INC.

Midwest Factory, General Offices—515 W. 35th Street, Chicago

NEW YORK FACTORY
43-20 34th Street
Long Island City

PACIFIC COAST FACTORY
3000 South Main St.
Los Angeles, Calif.

SOUTHWEST FACTORY
2218 N. Harwood St.
Dallas, Texas

EXPORT DIVISION
P. O. Box 636
Detroit, Mich.

REMPE COILS ARE UNIVERSALLY ENDORSED because

FREE



"FIN COIL ENGINEERING" is prepared for your convenience.

★ REMPE conservatively represents and rates its entire line for your protection and your customer's benefit.

★ REMPE answers your specifications thoroughly with experience designed and time-proved coils.

★ REMPE coils are calculated for maximum economy in both initial and operating investment.

Submit your specifications without obligation.

REMPE CO.

344 N. SACRAMENTO BLVD., CHICAGO, ILL.

Look to REMPE for

- ★ Panel Coolers
- ★ Fin Coils
- ★ Pipe Coils
- ★ Air Conditioning Coils
- ★ Blower Units
- ★ Coil and Drain Baffles
- ★ Autodraft Coils

Milwaukee Curlers Enjoy Crisp Air and Perfect Ice; Air Conditioning Aids Revival of Ancient Scotch Game

By Henry Knowlton

MILWAUKEE—"Soop, mon, soop," is the cry that echoes through the Milwaukee Curling Club as members of the organization swing into action on five new rinks which are kept frozen with industrial air conditioning equipment.

Instead of using the conventional method of placing refrigerator pipes under the ice, the Pflugrad Co. of this city installed a 10-ton conditioning unit which keeps the air in the building at about 28° F.—thus creating natural ice.

Curling, which is sometimes called "lawn bowling on ice," is a game which requires rare skill and sound strategy. Four men teams are captained by a "skip," who directs all shots down the 138-ft. strip of ice toward the "house" or goal at the end. As the 44-lb. stone moves down the ice, members of each team sweep away infinitesimal specks of dirt and ice in an effort to direct the course of the stone.

Common household brooms are used for sweeping, which the Scotch have called "sooping" for centuries. An interesting mixture of bowling and billiards—the idea is to knock other players stones out of position and place yours in the center of the goal or "house."

Stones are sent down the ice with "in-turn" and "out-turn" at the direction of the skip. The shot which knocks other stones out of position to the glory of the player and team is known as a "firing shot." In each round 16 stones are spun out and 14 rounds or "ends" as they are called, make up a "bonspiel" or match.

The cold crisp air created by the air conditioning unit adds zest to the hectic and exciting ancient Scotch game as members of the Milwaukee club sweep frantically to "bring her in" to the "house" at the end of the course.

It is no longer necessary for hardy Scots and other devotees of curling to gather on the windswept surface of a frozen pond to enjoy their favorite recreation. Thanks to industrial refrigeration and air conditioning, curling is rapidly returning to favor in many parts of the United States. The membership list of the Milwaukee club reads like a combined social register and directory of prominent business executives. Many are of Scotch descent, but the majority are Americans who have found that curling is good exercise—and great sport.

R. E. Welton, industrial engineer for the General Electric Co. in Milwaukee and a member of the Milwaukee Curling Club, was in part responsible for the cooling system which serves the Club's building. The building is leased from the Milwaukee County Park Commission, but the refrigeration equipment, insulation, lockers, showers, and other equipment were installed by the club membership.

"For curling," Mr. Welton explained, "the ice must be perfect. That is why it is better, and incidentally cheaper, to cool the air in the room and freeze the ice from the top down, rather than attempt to use refrigerant or brine coils under the ice. After the 138-ft. strips are frozen clear as glass, they are sprayed with tiny drops of water, which, when frozen, give the pebbled surface so important to putting plenty of 'English' on the stone as it travels down the ice."

The building which houses the five rinks used by the Milwaukee club was first insulated with 6 inches of rock wool, and then a 10-ton Trane cooling unit was installed in one corner of the room. This unit, which is powered by a 10-ton General Electric air conditioning compressor, operates with a coil temperature of 20° F.

The Trane unit is equipped with sprays above the coils for the purpose of continuous defrosting of the surface. Propylene glycol is sprayed over the coils, to remove "frost" or moisture as fast as it collects. This liquid is kept at a constant level in a tank located at the base of the conditioner and as the liquid becomes weakened by the addition of water taken from the air, the level rises.

To dehydrate the propylene glycol the "weak" liquid is permitted to



A. G. Pope, engineer for the Pflugrad Co., Milwaukee, prepares to sweep as R. E. Welton of Milwaukee Curling Club starts a "stone" down the ice.

overflow into a small electric heater equipped with three 500-watt electric elements. As the liquid is heated in this insulated tank; excess moisture is driven off, thus returning the propylene glycol solution to its proper degree of concentration.

The concentrated liquid is then run through a heat exchanger where it is reduced from 210° F. to approximately 60° F. and then returned to the large conditioner where it is mixed with the solution that is sprayed over the coils. The 20° "Freon" coils quickly reduce the propylene glycol solution to the desired temperature. No attempt is

made to regulate the relative humidity in the room.

With this equipment in operation the room is kept at approximately 28° F. temperature through the fall, winter, and spring. Mr. Welton believes that the 10-ton system will hold the room temperature to 28° during summer, if members want to use the club building.

Mr. Welton of the General Electric organization and A. G. Pope, refrigeration engineer for the Pflugrad Co. believe that the current increase in the sport of curling will open an extensive market for refrigeration and air conditioning equipment.

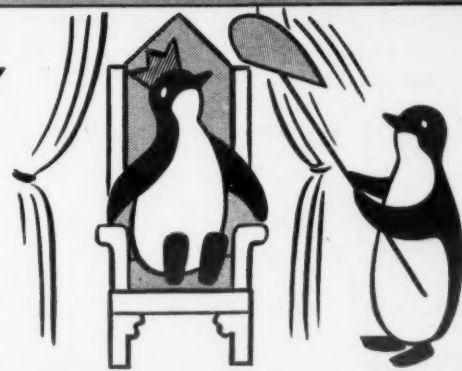


Mr. Pope of Pflugrad Co. shows Mr. Welton the 10-hp. G-E compressor which provides refrigeration to cool the club building.



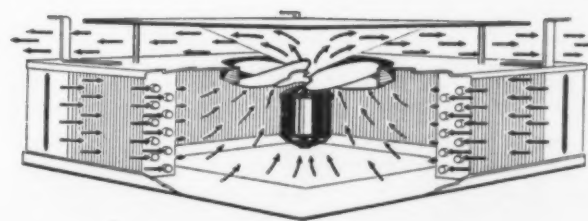
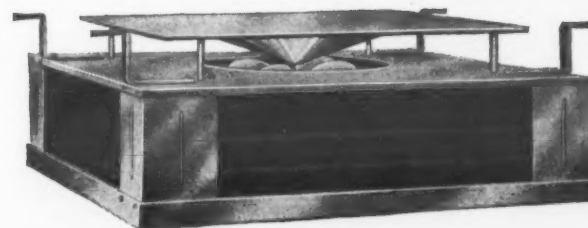
R. E. Welton with 10-ton Trane conditioning unit.

PERFECT AIR DISTRIBUTION at Low Velocity with BUSH RECOLD SUPREME UNIT COOLER



A distinct advance in forced air evaporator design . . . a large amount of surface . . . low air speed . . . wide distribution . . . in a compact unit. Warm air is drawn in on four sides . . . cooled evenly and economically . . . expelled gently against the top distributing cone . . . spread along box walls at low velocity. A built-in heat exchanger insures maximum efficiency. BUSH Supreme Unit Cooler air velocity averages 275 F.P.M. . . . conventional type fan units average 600 F.P.M.

WRITE FOR CATALOG AND PRICES





French-English Edition of the Commercial Service Manuals Manual No. F-1 Now Ready

As a service to foreign readers, the Master Service Manuals on commercial refrigeration are now being translated and published in a French-English edition. The first of these books is ready now and the second will be available in the near future. There will be six manuals in the completed series and an outline of the first two, Manual No. F-1 and Manual No. F-2, is given below.

Contents

Manual No. F-1

Presented in the first two chapters of the Master Service Manuals on Commercial Refrigeration are the theory and principles of refrigeration. These fundamentals, which form the ground work for the subsequent chapters of the series, are presented in simple terms so that they may be easily understood by even the non-technical man.

Manual No. F-2

Chapter 3, Properties of Refrigerants, includes such useful information as boiling points, effect on lubricating oils, inflammability and explosive properties, effect on health, how to locate leaks, and approximate operating head pressures of sulphur dioxide, methyl chloride, and Freon-12.

This chapter contains tables on the properties of sulphur dioxide, methyl chloride, and Freon-12. Another table gives the characteristics under standard ton conditions of Freon-12, Freon-11, carbon dioxide, ammonia, methyl chloride, isobutane, sulphur dioxide, methyl formate, and methylene chloride.

The Appendix, in the back of this manual, contains tables on the properties of methylene chloride (Carrene), carbon dioxide, trichloromonofluoromethane (Freon-11), dichloromonofluoromethane (Freon-21), and ammonia.

Chapter 4, Refrigerant Cylinders, Valves, and Safety Devices, contains much valuable information on handling, cleaning, I.C.C. regulations, safety devices, and testing and inspection of refrigerant cylinders. Refrigerant cylinders and valve equipment of all the leading refrigerant producers are illustrated and described and the refrigerant capacity specifications of the cylinders are given.

Chapter 5, Transferring Refrigerants, gives the recommended procedure for the transferring of refrigerants from larger to smaller (service) cylinders with a minimum of loss and danger.

Chapter 6, Dehydrating Refrigerants, deals with the problems involved in the removal of moisture from refrigeration systems. Characteristics of such drying agents as calcium chloride, calcium oxide, activated alumina, and silica gel are given and typical dryers are illustrated.

Manuel N° F-1

Les deux premiers chapitres de cet ouvrage présentent la théorie et les principes de la production du froid. Ces principes essentiels, qui constituent la base des chapitres qui suivent dans tous les manuels de la série, sont expliqués en simples termes, de sorte qu'ils soient facilement compris même par le lecteur sans connaissances techniques.

Manuel N° F-2

Le chapitre 3, Propriétés des fluides frigorigènes, comporte des renseignements utiles tels que les points d'ébullition; effets sur les huiles lubrifiantes; inflammabilité et explosibilité; effets sur la santé; comment déceler les fuites; et les pressions de fonctionnement approchées de l'anhydride sulfureux, du chlorure de méthyle, et du fréon-12.

L'Appendice, à la fin de ce Manuel, contient des tables (en unités métriques) des propriétés de l'anhydride carbonique, de l'ammoniaque, et du chlorure d'éthyle. Des tables relatives à quelques autres fluides frigorigènes sont également présentées, mais en unités anglo-saxonnes seulement.

Le chapitre 4, sur les bouteilles ou cylindres à fluide frigorigène, les robinets et les dispositifs de sécurité, contient beaucoup de renseignements précieux sur la manutention, le nettoyage, les règlements de la I.C.C. (Interstate Commerce Commission), les dispositifs de sécurité, et la vérification et l'épreuve des bouteilles à fluide frigorigène. Les bouteilles et les robinets fabriqués par tous les principaux producteurs de fluide frigorigène y sont illustrés et décrits, et l'on y trouve également des spécifications des capacités de ces bouteilles.

Le chapitre 5, Transvasement des fluides frigorigènes, explique la manière de procéder pour le transvasement des fluides frigorigènes des grosses bouteilles dans de plus petites ("de service") avec le minimum de pertes et de danger.

Le chapitre 6, Déshydratation des fluides frigorigènes, traite des problèmes comportés dans l'enlèvement de l'humidité des circuits frigorifiques. Les propriétés caractéristiques des agents déshydratants tels que le chlorure de calcium, l'oxyde de calcium, l'alumine activée, et le gel de silice, y sont exposées, et des sècheurs typiques sont illustrés.

The price of each book in the French-English edition is \$1.00 per copy. For shipments outside of the United States, there is a minimum extra charge of 50 cents. Up to six books may be shipped in one package. Write for details and publishing dates of later books in this series.

Business News Publishing Co.

5229 Cass Ave., Detroit, Mich., U.S.A.

Italian Air Conditioner Effective Against Poison Gas

Climatizzazione Artificiale

(Description in Italian)

I Condizionatori d'aria Badoni-Guarini usati per il lavaggio dell'aria e per l'assorbimento dei gas asfissianti

L'esperienza ha dimostrato che il Condizionatore d'aria Badoni-Guarini assorbe rapidamente i vapori d'acqua l'acido carbonico, il gas illuminante, i cattivi odori, ecc., facendo in modo perfetto il lavaggio dell'aria.

Questo lavaggio si effettua generalmente assai bene dopo un solo rinnovo d'aria.

I Condizionatori d'aria sunnominati servono assai bene per i rifugi, le caserme, i depositi, ecc., in caso di incursioni aeree e lancio di bombe con gas asfissianti.

Durante la guerra 1914-1918 l'esperienza ha dimostrato che i gas cloro e foscene, due fra i più tossici, diventano assolutamente inoffensivi durante la pioggia.

L'acqua assorbe tutti i gas, per contatto, in quantità più o meno grande secondo la natura del gas e la sua tensione e secondo la temperatura dell'acqua.

Più forte è la tensione del vapore del gas e più grande è l'assorbimento di questo gas. Inoltre l'assorbimento è tanto più grande quanto la temperatura dell'acqua è più bassa.

Per esempio: 1 m.³ di acqua alla temperatura di 15° C assorbe un m.³ di acido carbonico alla pressione atmosferica. Questa quantità rappresenta la quantità di acido carbonico emesso da 50 persone in un'ora.

Ogni persona emette 20 litri di acido carbonico all'ora.

1 m.³ d'acqua a 20° C assorbe m.³ 2,5 di cloro alla pressione atmosferica, cioè Kg. 7,5. Con dell'acqua a 0° si assorbono 5 m.³ di cloro, cioè 15 Kg.

Tutti i Condizionatori umidi d'aria possono servire al lavaggio dell'aria ed all'assorbimento del fumo, vapori d'acqua e gas contenuti nell'aria.

I Condizionatori d'aria Badoni-Guarini, costruiti dalla S. A. Antonio Badoni di Lecco, si prestano benissimo per questa applicazione per i motivi seguenti:

1°) L'aria è sotto una pressione di 8/10 m/m ciò che facilita la penetrazione del gas nell'acqua, a condizione che la tensione del gas sia superiore alla tensione del vapore d'acqua dell'acqua;

2°) La distanza fra le lastre è stata ridotta a 5 m/m ciò che facilita la penetrazione del gas nell'acqua.

Inoltre arriviamo a delle dimensioni molto più ridotte che in tutti gli altri scambiatori umidi e soprattutto negli apparecchi a polverizzazione.

EMILIO GUARINI

Emile Guarini

Milan

Casella Postale 214

International Institute To Make Announcement On French Manuals

Institut International du Froid
9, Avenue Carnot
Paris, France

April 3, 1940

Publisher:

Yours of last month duly to hand, also press copies of "Théorie et principes de la réfrigération mécanique," by K. M. Newcum. I thank you very much for same and, anew I wish congratulate you for having realized successfully such a publication which, no doubt, claimed considerable painstaking and patient work.

I am pleased to publish in a next issue of the "Bulletin" of the Institut International du Froid, a bibliography of "Théorie et principes de la réfrigération mécanique." Moreover, I asked Mr. J. B. Verlot, General Secretary of the French Association of Refrigeration, to insert a notice about this manual in Revue Générale du Froid, official organ of this group. I suppose this announcement will serve as useful propaganda through the French refrigerationists.

Despite of the dreadful wartime, I hope your new book will take the place it deserves among the literature devoted to the refrigeration.

DR. MAURICE PIETTRE,
Director

Air Washer Design Will Absorb Gases, Is Claim

An air conditioner designed with very much of an eye to its usefulness in times of war is the Badoni-Guarini air conditioner described in a bulletin received by AIR CONDITIONING & REFRIGERATION NEWS from Condizionatori D'Aria Aderenze Badoni, Milan, Italy.

The bulletin is printed in French and Italian and parts of the bulletin in these two languages are reprinted on this page.

The conditioners are of the air washer type, and apparently use "scrubber plates."

"These conditioners," says the bulletin, "serve admirably well for refuges, barracks, depots, etc. in case of an aerial attack and the hurling of bombs with asphyxiating gas."

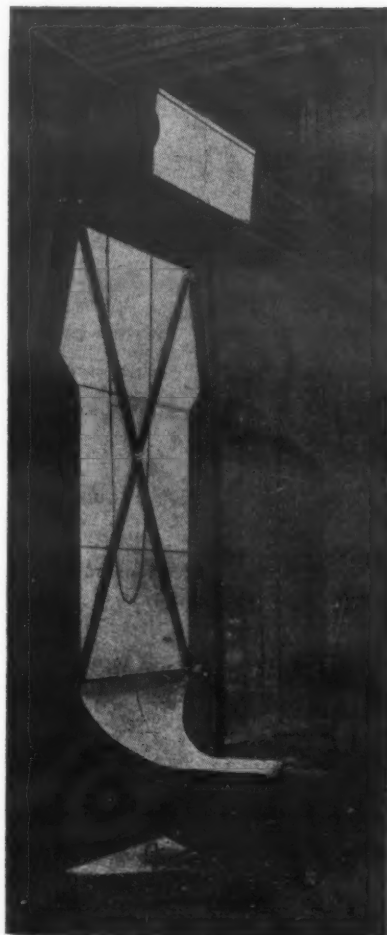
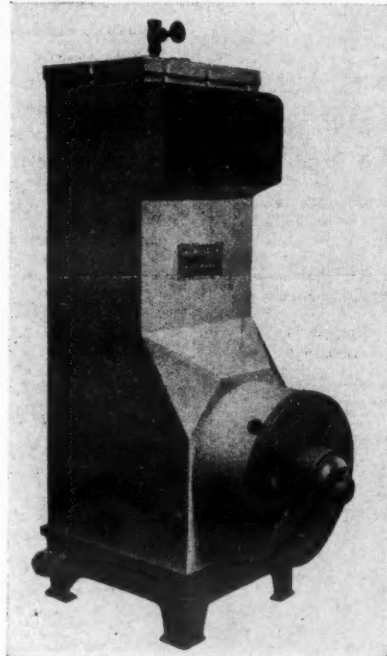
"During the war of 1914-1918, experiences showed that chloric gas and phosgene, two of the most poisonous gases, became harmless during the rain."

"The water absorbs by contact all the gas in a measure more or less great depending on the nature of the gas and its pressure, and also the temperature of the water."

"The greater the pressure of the vapor of the gas the greater is the absorption of that gas. On the other hand, the absorption is also greater when the temperature of the water is lower." A 20° C. drop in temperature will double its chlorine-absorbing ability, the bulletin says.

The Badoni-Guarini air conditioner, it is claimed, is especially good at washing the air and absorbing the fumes because (1) the air is kept under a pressure which facilitates the penetration of the gas in the water, and (2) the distance between the plates has been reduced.

Badoni-Guarini Conditioners



Climatisation Artificielle

(Description in French)

Les Conditionneurs d'air Badoni-Guarini employés pour le lavage de l'air et pour l'absorption des gaz asphyxiants

L'expérience a démontré que le Conditionneur d'air Badoni-Guarini absorbe très rapidement les vapeurs d'eau, l'acide carbonique, le gaz d'éclairage, les mauvaises odeurs, etc., en faisant le lavage parfait de l'air.

Ce lavage généralement s'effectue très bien après un seul renouvellement d'air.

Les Conditionneurs précités servent admirablement bien pour les refuges, les casernes, les dépôts, etc., en cas d'incursion aériennes et lancement de bombes avec gaz asphyxiants.

Pendant la guerre 1914-1918 l'expérience a démontré que les gaz chlore et foscène, deux parmi les gaz les plus toxiques, deviennent inoffensifs pendant la pluie.

L'eau absorbe, par contact, tous les gaz, dans une mesure plus ou moins grande, suivant la nature du gaz et sa tension et suivant la température de l'eau.

Plus forte est la tension de la vapeur du gaz, plus grande est l'absorption de ce gaz. D'autre part l'absorption est d'autant plus grande que la température de l'eau est plus basse.

Par exemple: 1 m.³ d'eau à la température de 15° C absorbe 1 m.³ d'acide carbonique à la pression atmosphérique. Cette quantité correspond à l'acide carbonique émis par 50 personnes pendant une heure.

Comme on sait chaque personne émet, par heure, 20 litres de C O₂

1 m.³ d'eau à 20° C absorbe 2,5 m.³ de chlore à la pression atmosphérique, soit 7,5 Kgs. Avec de l'eau à 0° on en absorbe 5 m.³ soit 15 Kgs.

Tous les Conditionneurs d'air humide peuvent servir au lavage de l'air et à l'absorption des fumées, vapeurs d'eau et gaz contenues dans l'air.

Les Conditionneurs d'air Badoni-Guarini, construits par la S. A. Antonio Badoni de Lecco (Italie), se prêtent admirablement bien pour cette application, pour les raisons suivantes:

1°) L'air est sous une pression d'environ 8/10 m/m ce qui facilite la pénétration du gaz dans l'eau, à condition que la tension du gaz soit supérieure à la tension de la vapeur d'eau de l'eau;

2°) La distance entre les plaques a été réduite à 5 m/m, ce qui facilite la pénétration du gaz dans l'eau.

En outre nous arrivons à des dimensions beaucoup plus réduites que tous les autres échangeurs humides et surtout des appareils à pulvérisation d'eau.

EMILIO GUARINI

NEED HELP?
We Furnish
TRAINED MEN
Don't take a chance!
Get the Right Man
the First Time.
U.E.I. trained men
are available in your locality. They make
better employees for all positions requiring
mechanical ability or technical knowledge...
because they know their work.
We have the man you want. Phone,
write or wire us. The service is prompt,
confidential and FREE.

UTILITIES ENGINEERING INSTITUTE
404 N. Wells St. Est. 1927 Chicago, Illinois

Anaconda Copper Refrigeration Tubes
Easily bent!
THE AMERICAN BRASS CO.
FRENCH SMALL TUBE BRANCH
Rue de la Paix, 100, Paris

Where Cooling Systems Were Installed During 1939 In Nine U. S. Cities

Editor's Note: Published on this and the following pages are complete reports of 1939 air conditioning installations in nine U. S. cities—Chicago, San Antonio, Tex., Indianapolis, Kansas City, Mo., Sioux City, Iowa, Toledo, Akron, Ohio, Pensacola, Fla., Joplin, Mo., and Omaha, Neb.

Shown are name and address of the place in which the installation was made, make of equipment (and installer, where given), and size of each system. Complete data on other cities will be published in future issues.

Chicago, Ill.

(Compiled by Commonwealth Edison Co., Air Conditioning Division)

Name and Address	Equipment and Installer	Tonnage	Hp.
AMUSEMENTS			
Cindrella Recreation, 5610 W. Madison St.	Kelvinator-M. & M.	25.0	28.0
Hyde Park Recreation, 5122 Lake Park Ave.	G-E-Air Conditioning	30.0	35.0
Pladium, Inc., 2625 N. Clark St.	G-E-Heating Systems	60.0	75.0
Queen Bowling Alley, 6244 S. Ashland Ave.	Excell-Hilger	20.0	5.0
South Shore Recreation, 6830 Stony Island.	York-West. & Camp	40.0	53.0
BANKS			
2nd Fed. Sav. & Loan Assn., 4048 26th St.	West-Kroeschell	10.0	12.0
Home Fed. Saving & Loan, 1618 W. 18th St.	Trane-Heating Systems	10.0	11.0
BARBER SHOPS			
Davis, Frank M., 1548 E. 67th St.	General Electric	1.0	1.25
Drake Hotel Barber, 140 E. Walton Pl.	General Electric	3.0	3.0
BEAUTY SHOPS			
Dean, Hazel, 1948 E. 71st St.	York-West. & Camp.	5.0	5.50
Farley Beauty, 7109 S. Crandon.	Carrier-West-Hair	5.0	5.50
Hubner, Viola, 915 E. 79th St.	General Electric	3.0	5.50
DOCTOR			
Rose, Dr. Philip, 4809 Lincoln.	West-Kroeschell	1.0	1.0
FUNERAL PARLORS			
Bourne, A. J., 6243 S. Kedzie.	Carrier-Adv. Heating	5.0	5.50
Burke, John, 5533 S. Wentworth.	Kelvinator-M. & M.	5.0	5.50
Drake & Son, 5200 N. Western Ave. (Add'l).	Howe	5.0	5.0
Dunlop, Thos., 1750 W. 35th St.	Carrier-Air Comfort	5.0	5.50
Heeney, Paul, 2123 W. 95th.	Trane-Godfrey	15.0	17.50
Hursen Funeral Home, 1820 S. Michigan.	Carrier-Air Comfort	6.0	6.0
Martens, 6453 S. Ashland.	Kelvinator-M. & M.	5.0	5.50
Mee & Ramme, 3918 Irving Park.	West-Kroeschell	25.0	30.0
Piser's Funeral, 6935 Stony Island.	Gen. Ref.-Adv. Heating	30.0	35.0
Prish, Claude, 3421 W. Fullerton.	Mills-Ref. Maintenance	3.0	3.0
Schneider, 2024 E. 75th.	G-E-Air Conditioning	20.0	22.0
HOSPITAL			
St. Luke's Hospital, 1439 S. Michigan Ave.	Carrier-Air Comfort	5.0	5.50
HOTELS			
Blackstone Hotel, S. Michigan-Balbo.	Fairbanks-Morse	3.0	4.0
Bismarck Hotel, 171 W. Randolph St.	Wittenmeier	100.0	245.0
Del Prado Hotel, 5301 Hyde Park.	Frick-Midwest	25.0	28.0
Morrison Hotel, Clark-Madison.	Standard	5.0	5.50
INDUSTRIAL APPLICATIONS			
BAKERIES			
Mayflower Doughnut, 1933 S. Halsted St.	Kelvinator-M. & M.	5.0	5.50
Nat'l Biscuit Co., 22 N. Morgan St.	Drying Systems	15.0	30.0
Paul Schulze Biscuit Co., 25 N. Green St.	Natkin Engr. Co.	12.50	35.0
Salerno Megowen Biscuit Co., 4440 W. Division St.	York	17.0	25.0
Sawyer Biscuit Co., 1025 W. Harrison St.	York	20.0	20.0
Wagner Baking Co., 1715 W. Howard.	Frick-Midwest	20.0	23.0
CANDY			
Bloomer Chocolate Co., 600 W. Kinzie.	Carrier-Air Comfort	15.0	17.0
Confections, Inc., 4614-16 W. Washington.	Carrier-Air Comfort	5.0	5.50
Culinar Products, 927 W. Concord.	Vilter	15.0	3.0
Harrison, Helen, 325 N. Wells.	York-West. & Camp.	15.0	18.0
Holloway, M. J. & Co., 300 W. Ontario.	Vilter	115.0	115.0
Martha Washington, 3823 Broadway.	York-West. & Camp.	3.0	3.50
Nutrine Candy Co., 412 W. Erie.	General Refrigeration	60.50	68.50
Shutter-Johnson, 1013 N. Cicero.	Carrier	30.0	34.0
Thinsell Candies, Inc., 1407 W. Jackson Blvd.	York	35.0	46.0
PRINTING			
Chicago Roto Print (Ad.), 4601 Bennet.	G-E-Wendt-Cronw.	75.0	97.50
MISCELLANEOUS			
Automatic Electric, 1033 Van Buren St.	West-Trane	1.0	1.33
Automatic Electric, 1033 Van Buren St.	York-West. & Camp.	3.0	3.50
Bert Packing Co., 176 N. Green St.	Frick-Midwest	10.0	12.0
Blue Valley Crmy. (Pkg. & Churn, 1137 W. Jackson Blvd.	Carrier	15.0	44.0
Crane Co., 4100 S. Kedzie Ave.	West-Kroeschell	0.50	0.50
Crane Co., 4100 S. Kedzie Ave. (Add'l).	West-Kroeschell	7.50	7.50
Portland Cement Assn., 33 W. Grand.	Carrier-Kroeschell	15.0	22.50
Scholl Mfg. Co., 211 W. Schiller.	F-M-Baldwin	15.0	18.0
The Glidden Co., 5156 W. Moffitt.	General Electric	1.50	1.50
U. S. Gypsum Co., 1253 Diversey Ave.	F-M-Baldwin	3.0	6.75
Waters Co., 6501 W. Grand Ave.	Carrier-Air Comfort	5.0	5.0
OFFICES, GENERAL AND BUILDINGS			
American Air Lines, 4848 W. 63rd St.	Frigidaire-Wendt	10.0	11.50
American Airways, Inc., 4848 W. 63rd St.	Frigidaire-Wendt	3.0	3.50
American Elec. Fusion, 2610 Diversey.	Frigidaire-Wendt	25.0	8.75
American Molasses, 330 E. North Water.	York-Moffitt	15.0	17.0
Beatrice Creamery, 1526 S. State St.	Brine-West. & Camp.	0.0	2.0
Bell Savings Bldg. Loan, 30 N. LaSalle St.	Carrier-Air Comfort	30.0	37.50
Block, Fred Co., 222 W. North Bank.	Carrier	5.0	5.50
Caples Co., 225 E. Erie St.	Mills-Standard	5.0	5.0
Central Products, 214 W. Ohio St.	York-West. & Camp.	3.0	3.50
Chicago Casket Co., 932 W. Washington.	York-West. & Camp.	3.0	3.25
Chicago Roller Skate, 4450 W. Lake St.	Gen. Ref.-Douglas	30.0	36.0
Civil Aeronautics, 6200 S. Cicero Ave.	Kelvinator-M. & M.	3.0	3.50
Clark, 123 N. Club, 123 N. Clark St.	Frigidaire-Chi. Ref.	10.0	11.50
Club (700), 700 W. 63rd St.	West-Kroeschell	25.0	30.75
Community Motors, 235 E. 33rd St.	Frigidaire-Wendt-Crone	8.0	8.75
Complete Ref. Service, 3819 N. Ashland Ave.	General Electric Assem.	3.0	3.0
Container Corp., 111 W. Washington St.	Carrier	30.0	35.0
Costello's, 114 N. Dearborn St.	Frigidaire-Kohlman	10.0	11.50
Dessent, E. I. & Co., 216-18 N. Canal St.	York-Frigidaire Assem.	5.0	5.0
Economy Plumbing, 1308 S. Pulaski Ave.	Trane Assembled	5.0	5.50
Federal Savings Loan, 12000 S. Ashland Ave.	York-Harp Barce	5.0	5.75
Field Building (Four Fls.), LaSalle & Adams St.	Carrier	750.0	900.0
Film Exchange, 1301 S. Wabash Ave.	Carrier-Air Comfort	35.0	40.0
Franklin Dress Shop, 318 W. Adams St.	Carrier-Air Comfort	5.0	6.0
Grass Noodles Co., 6027 S. Wentworth Ave.	Frick-Midwest	3.0	3.25
Great Western Steel, 2300 W. 58th St.	Frigidaire-Wendt-Crone	10.0	12.0
Gutman & Co., 1511 W. Webster Ave.	York-West. & Camp.	2.0	2.25
Hasbin, A. G., 615 S. California Ave.	Standard-Gawne	6.0	7.0
Heyer Corp., 911 W. Jackson Blvd.	Fairbanks-Morse	3.0	3.50
Hills-McCanna, 3021 N. Western Ave.	Carrier-Adv. Heating	25.0	30.0
Hirsch-Max, 25 W. Adams St.	York-West. & Camp.	20.0	23.0
Illinois Creamery Sup., 715 S. Damen Ave.	York-West. & Camp.	3.0	3.25

(Continued on Page 18, Column 4)

Window Ventilator 'Pay-Trial' Plan Leads To Unit Air Conditioner Sales

By Henry Knowlton

CHICAGO—Selling window ventilating units on a five-day trial basis, for which the customer pays \$8, is the merchandising spearhead used by the 16-man sales organization of Air Comfort Corp. here, in paving the way for sales of room coolers and unit store conditioners. The sales force is managed and trained by J. G. Thomas who says that men must be taught "the basic principles of selling" because "there are so few salesmen in the world that it is not even funny."

The marketing program which Mr. Thomas has had in effect since March of 1939 was worked out with great care. At the outset, salesmen for the company are coached never to use the words "air conditioning" because during warm weather "air conditioning salesmen" are calling on every likely prospect in Chicago. Mr. Thomas has selected the window ventilator, built by Carrier, as the most logical specialty sales approach to the air conditioning market.

The window ventilator units, which are sold at retail from \$61.50 to \$89.50 less installation, are never "sold" to the customers on the first call. The salesman is trained to induce the customer to accept the unit on a five-day trial basis, for which the customer agrees to pay \$8 cash. After the trial period is over the customer signs a new contract covering the full price of the unit, or a service man for Air

Comfort Co. takes it out without question. Mr. Thomas reports that "98% of the trial units are purchased by the prospect."

Realizing that the best way to sell window ventilating units, or any other air conditioning equipment for that matter, was to let the prospect see the results for himself—in his own home or office, Mr. Thomas soon abandoned the idea of a "free trial," as it is well known that "everybody will accept things on a free trial basis, whether they are interested or not."

Mr. Thomas states that he has tried "everything," in selling equipment of this kind, and has learned that to deviate from the "pay-trial" system is to invite trouble. He reports that the system has worked out to the complete satisfaction of both himself and prospective customers for a number of reasons.

1. The system automatically "qualifies" a prospect, because no prospect will fork over \$8 for a five-day trial unless he is really interested in giving the product a fair trial.

2. It is a straight business transaction—which appeals to the prospect, who is a business man himself.

3. It does not obligate the prospect, and business men do not like to be obligated to any extent.

4. After the unit has been installed the prospect will take more interest in it, and pay more attention to it

(Continued on Page 18, Column 3)

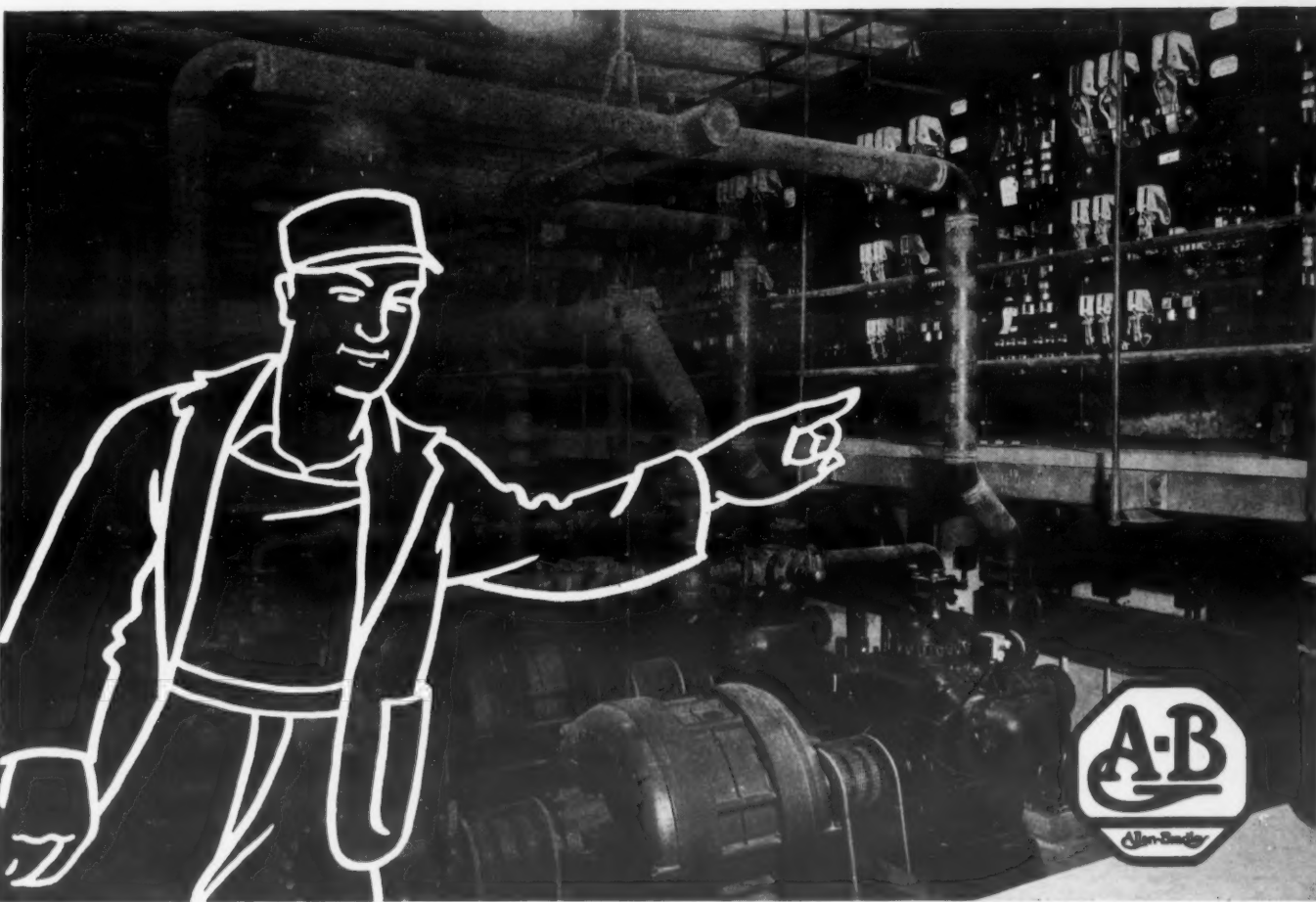


J. G. Thomas, sales executive for Air Comfort Corp., says air conditioning salesmen must learn "the basic principles of selling."



Mr. Thomas and Hal K. Wheeler, of Air Comfort Corp., with Carrier window ventilator unit in the company's showroom.

Here's reliable control for BIG jobs as well as the small



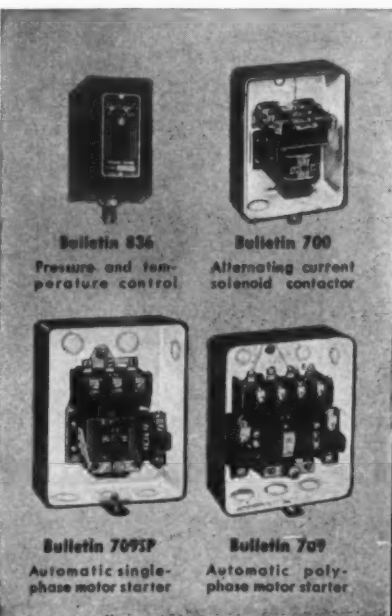
Four 150-hp Allen-Bradley starter panels controlling synchronous motors driving compressors in air conditioning service in a Columbus, O., department store

Prevent Trouble — Save Servicing Costs with Allen-Bradley Control

For controlling the smallest oil burner motor or the largest synchronous compressor motor, there is an Allen-Bradley control to meet your needs. All of these starters, both large and small, are built with the same simplicity and rugged reliability. They are designed to operate day-in and day-out with a minimum of attention or maintenance.

Smaller Allen-Bradley starters for the air conditioning and refrigeration field have solenoid mechanisms; maintenance-free double break, silver alloy contacts; fewer moving parts; low drop-out voltage; thermal overload relays; white interiors; many knockouts; accessible interiors; removable cabinet covers; etc.—all features of value to owner and operator. Specify Allen-Bradley for trouble-free performance!

Allen-Bradley Company, 1313 S. First Street, Milwaukee



ALLEN-BRADLEY
SOLENOID MOTOR CONTROL

Southern Hotel Conditioned

JACKSON, Miss.—Contract for air conditioning of the lobby, second, third, and fourth floors of the Waltham hotel has been awarded to York Ice Machinery Corp. Installation work will be started immediately.

ately. The job will cost about \$21,000, according to officials of the hotel.

A permit for construction of an addition to the rear of the hotel's second floor to house the air conditioning equipment has been issued by the city engineer's office.



TYPE SL-SP

Electrimatic**SOLENOID VALVES**

for "FREON"—WATER—Etc.

Manual by-pass
3 to 9 Ton Liquid Lines
¼ to 1 Ton Suction LinesTHE ELECTRIMATIC CORPORATION
2100 INDIANA AVE., CHICAGO, ILL.**EASY BENDING**

You get it in WOLVERINE TUBING

WOLVERINE TUBE CO. DETROIT

MANHATTAN V-BELTS

for the Service that Saves

POWER—because side compressibility makes belt grip the grooves without slip—because flexibility gives uniform "pull."

WEAR—because endless cord strength member floats in rubber in neutral axis, resisting internal heat and side wear.

TIME—because maintenance and service are uninterrupted.

THE MANHATTAN RUBBER MFG. DIVISION
OF RAYBROS-MANHATTAN, INC.
45 Townsend Street Passaic, New Jersey

WIZARDAIRE
CONDITIONER

A low priced air conditioner that's on duty 12 months of the year!

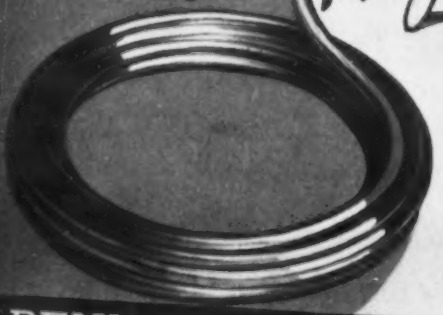
1. Hermetically Sealed Refrigeration System.
2. Full 4,100 BTU/HR Cooling Capacity.
3. Available In Two Attractive Models.
4. Provides All-Year-'Round Ventilation.
5. Smoke Exhaust (on DeLuxe Model).

Attractive proposition for distributors and dealers. Write at once.

Certified Products Co. 136 Huron St.
Toledo, Ohio.

EASILY BENTREFRIGERATION
TUBING

"Superior" Copper Tubing has uniform wall thickness—all sizes stocked in exact 50 ft. or 100 ft. coils.



PENN BRASS & COPPER CO., INC.
ERIE, PA. U. S. A.

Ventilators Pave Way To Conditioner Sales

(Continued from Page 17, Column 4) than if it had been installed on a "free trial" basis.

5. It gives the salesman an opportunity to do a better selling job during the five-day trial period. The demonstration makes the trial stick.

6. It is easier for the salesman to sell \$8 worth of service than \$108 worth of merchandise. (The installed price of the average unit.)

7. The prospect is taught how to operate the unit correctly and demonstrate it to his friends during the trial period.

8. Selling air conditioning is changed from "selling an intangible" to "selling merchandise in the prospect's place of business."

9. The prospect gets a complete understanding of how the equipment will function to the benefit of himself and his organization.

10. The salesman never attempts to "close" the deal—he assumes when the unit is put in on trial that the prospect will keep it.

In working out his "pay-trial" system for selling air conditioning, Mr. Thomas reasoned that in the past air conditioning has been an engineering proposition. Early work in theaters, department stores, and other large buildings all required a great deal of engineering talent, together with skill in handling large contracts.

SELLING MADE EASIER

During the past four or five years, Mr. Thomas pointed out, more and more "engineering" of air conditioning units has been done at the factory, making it possible for a specialty selling organization to present the equipment to the public as complete units, designed to do a specific job. The next important step, Mr. Thomas believed, was to work out a plan for selling these package units.

Mr. Thomas reasoned that it was of utmost importance to keep salesmen working all year around—in order to give them an assured income. The room cooler, he realized, had splendid sales potential for four or five months of the year, but did not provide the year-around volume on which to build a money making sales force. For this reason he selected the Carrier window ventilator as the basic item, coupled with room coolers, store conditioners, and Sandaire humidifier, built by U. S. Air Conditioning Co. The cooling units would sell in summer, the humidifying units in winter and the ventilators would sell at every season of the year.

For his specialty selling force—and the 12 men he hired originally, are still with him, Mr. Thomas selected men who had had experience in specialty selling, or selling direct to the consumer on household refrigerators, stokers, typewriters, radios, and similar items. These men knew nothing about air conditioning.

These men were not given a "curbstone education in air conditioning" but were taught the fundamentals of ventilation, air movement, air cleaning, and the many advantages of fresh, clean air. They were also taught the fundamentals and principles of specialty selling.

GETTING A HEARING

Starting with the approach to the receptionist—or secretary, in a business organization, Mr. Thomas taught his men to use ordinary courtesy—to always say "good morning" or "good afternoon" to the girl on the front desk. (If you have ever watched salesmen come and go in the average reception room—you know what I am talking about—Mr. Thomas observed.)

"I am from Air Comfort Corp., and would like to see Mr. Jones if he is available," the salesman was instructed to say.

"What about?" asks the receptionist, anxious to protect the "boss" from intrusions.

"I would like to have a talk with him about the ventilation of the office and get some information on the noise condition," the salesman replies. (Here the word "air conditioning" is never mentioned.)

When the salesman meets the customer—usually the executive in charge of the business organization, he is taught by Mr. Thomas to establish his own name in the

(Continued on Page 19, Column 3)

Chicago 1939 Installations (Cont.)

(Continued from Page 17, Column 2)

Kaiser, H. S. Co., 3336 W. Franklin St.	Mills-Kaiser	3.0	3.50
Kiely, Burt R. & Co., 4202 Broadway	Kelvinator-M. & M.	3.0	3.25
Levy, Chas. Circular Co., 1909 W. Lake St.	York-West. & Camp.	5.0	5.25
Libby McNeill & Libby, U. S. Yards	Self Made	75.0	75.0
Logan Engineering Co., 4901 Lawrence Ave.			
Lord & Thomas, 919 N. Michigan Ave.	West-Kroeschell	7.50	7.50
Lowe, Joe Corp., 1000 Ogden Ave.	Frigidaire-Wendt-Crone	3.0	3.0
Lucien Lelong, 55 E. Washington	Carrier-Air Comfort	15.0	18.0
Metro. Life Ins. Co., 3165 W. Madison St.	Kroeschell	0.0	3.0
Metro. Life Ins. Co., 9 S. Kedzie Ave.	Frigidaire-Kohlman	3.0	3.50
Monogram Pictures, 1250 S. Wabash Ave.	Carrier-Air Comfort	3.0	3.33
Natl' Chemical & Co., 3617 S. May St.	Advance Heating	5.0	5.50
Nutrine Candy (Add'l), 419 W. Erie St.	West-Kroeschell	2.0	2.50
Orange Crush, 318 W. Superior St.	Frigidaire-Northtown	5.0	5.75
Pabst Blue Ribbon, 221 N. LaSalle St.	Frigidaire-Northtown	5.0	5.75
Pabst Blue Ribbon, 221 N. LaSalle St.	Frick-Adv. Heating	5.0	5.0
Peter Hand Brewery, 1612 N. Sheffield Ave.	Misc-Adv. Heating	23.0	26.0
Purity Bakery, 844 N. Rush St.	Kelvinator-M. & M.	5.0	5.50
Reynolds, S. J. Co., 2223 W. Ogden Ave.	Standard Air Cond.	2.0	2.25
Russel, Dave, 24 E. Lake St.	Trane-Assembled	5.0	5.50
St. Ritus School, 6312 Oakley Ave.	General Refrigeration	40.0	45.0
Sears-Roebuck, Arthington & Homan Ave.	G-E-Air Conditioning	2.0	2.0
State-Washington Club, 32 N. State St.	Vilter	15.0	15.0
Swank Products, 222 N. Bank Drive	Carrier-Air Comfort	15.0	18.0
Sweeney, James, 229 S. Wabash Ave.	Frigidaire-Wendt	3.0	3.0
Swift & Co., U. S. Yards	Mills-Fairbanks	22.50	22.50
United Air Lines, 5940 S. Cicero Ave.	Vilter	300.0	500.0
United Light & Power, 339 S. LaSalle St.	Frigidaire-Wendt-Crone	110.0	125.0
Universal Oil Prod., 300 S. Michigan Ave.	Mills-Standard	5.0	5.0
Vandercook & Sons, 900 N. Kilpatrick Ave.	West-Kroeschell	20.0	23.0
Vilter Mfg. Co., 230 W. Superior St.	Kelvinator-M. & M.	7.50	8.25
Witt Club, 3160 Broadway (Add'l)	Vilter	5.0	6.0
	Kelvinator-M. & M.	1.50	1.50

OFFICES, PRIVATE

Atlantic & Pacific, 211 W. Archer Ave.	General Electric	1.0	1.0
Baker, L. T., 30 W. Washington St.	Standard Air Cond.	2.0	2.25
Belmont, Radio Corp., 1257 Fullerton Ave.	Frigidaire	1.50	1.50
Burton Dixie Corp., 2024 S. Racine Ave.	Kelvinator-M. & M.	1.0	1.0
Castle, A. M. & Co., 1300 N. Branch St.	West-Kroeschell	5.0	5.75
Chicago Mail Order Co., 501 S. Paulina St.	Kroeschell	1.50	1.50
Denniston, 4856 S. Western Ave.	Kelvinator-M. & M.	1.50	1.50
Interstate Co., 71 E. Lake St.	Mills-Larkin	0.50	0.50
National Bank, 1st, 38 S. Dearborn St.	G-E-Air Cond.	3.0	3.50
National Bank & Invest., 228 N. LaSalle	Carrier-Wendt	1.0	1.25
Weinsheimer, McGill, 1320 S. Wabash	Carrier-Air Comfort	1.50	1.50

RESIDENCES

Bennett, Stevens A., 11213 S. Lother	Frigidaire-Kohlman	3.0	3.25
Fuge, Charles, 3139 Irving Park	Mills-Imperial	0.75	0.75
Goodman, Wm., 5337 University	G-E-Doherty	3.0	3.25
Ragen, J. M., 10756 S. Seeley	Carrier-Air Comfort	4.50	4.50

RESTAURANTS

Andy's Grill, 2350 N. Clark St.	York-West. & Camp.	5.0	5.50
Burgundy Tavern, 2335 N. Clark St.	General-Guge	5.0	5.0
Burnham Bldg. Rest., 160 N. LaSalle St.	Carrier-Air Comfort	15.0	16.50
Callahan Grill, 5660 W. Lake St.	Mills-Cont-Ref.	3.0	3.50
Cantonesse Rest., 1007 Rush St.	Kelvinator-M. & M.	3.0	3.25
Central Plaza Hotel, 321 N. Central Ave.	Howe	5.0	5.0
Central Restaurant, 5563 W. North Ave.	Vilter	10.0	11.50
Chalmers, Peter, 1502 Jarvis	Reliable	5.0	5.75
Chinese Village, 2447 W. 63rd St.	Frigidaire-Kohlman	3.0	3.75
Chuck Wagon, 6402 N. Western	Reliable Refrig.	7.50	9.0
Colony Club, 744 N. Rush St.	Vilter-Nat'l-Kroeschell	20.0	26.0
Continental, 772 W. 63rd St.	Reliance-Reliable	7.50	9.0
Cooper, Jack N., 326 E. 58th St.	Carrier-Air Comfort	5.0	5.50
DeMet's, 141 W. Jackson	Carrier-Air Comfort	15.0	17.0
Dog House, 183 N. State St.	Frigidaire-Kohlman	5.0	5.75
Esquire Restaurant, 876 E. 63rd St.	Reliable	12.50	14.0
Ferndell Restaurant, 3956 W. North	F-M-Hanley	12.50	13.50
Florist Buffet, 1301 W. Randolph	Standard	5.0	5.75
Foley, Ray, 5716 W. Madison	Universal-West. Refrig.	10.0	13.0
Geisler, Beckie, 807 E. 47th St.	York-West. & Camp.	6.0	7.50
Gimbel's Inc. (from Oriental, 30 W. Randolph St.)	Kroeschell	35.0	75.0
Gold's Restaurant, 808 W. Roosevelt Rd.	Kroeschell	40.0	78.0
Gordon's Open Kitchen, 1010 Rush St.	West-Kroeschell	15.0	17.0
Green's, 7916 S. Halsted	York-West. & Camp.	10.0	11.50
Grove Restaurant, 7901 Cottage Grove	Merchant & E-Blake	10.0	11.0
Guyon Hotel Restaurant, 114 N. Pulaski Rd.	Vilter	20.0	23.0
Hamilton Grill, 845 N. Wabash	Kelvinator-M. & M.	6.0	6.50
Hamilton Grill, 608 S. Michigan	F-M-Baldwin	10.0	2.0
Harding's Restaurant, 158 W. Monroe	Carrier-Douglas	60.0	60.0
Harvey's, 47 W. Polk St.	G-E-Johnson	20.0	23.0
Hitching Post, 3938 W. Madison	G-E-Adv. Heating	7.50	9.0
Howitz Restaurant, 3958 Roosevelt	XL-Hilger	15.0	16.50
Interstate, Ill. Cen. Ran. Depot	Carrier-Air Comfort	10.0	11.0
Isbell's Rest., 590 Diversey Pkwy. (Add'l)	Frigidaire-Wendt-Crone	20.0	21.50
John's Grill, 2468 N. Clark St.	Merch. & Evans-Blakeaire	5.0	5.50
Just-A-Bite, 920 E. 63rd St.	XL-Baldwin	3.0	3.50
LaSalle Cafe, Madison-Clinton	Merch. & Evans-Blakeaire	7.50	8.50
LaSalle Cafe, 600 S. Wabash	Merch. & Evans-Blakeaire	10.0	11.0
LaSalle Lunch, 543 W. Madison St.	Frigidaire-Kohlman	3.0	3.25
Light House, 1453 E. Hyde Park	Frigidaire-Kohlman	7.50	8.50
Lincoln-Belmont "Y", 3321 N. Marshallfield	Curtis-Nat'l Korectaire	15.0	18.0
Little Bohemia, 1722 S. Loomis St. (Add'l)	Baker-Burge	10.0	11.50
Little Jack's Restaurant, 3175 W. Madison St.	Kroeschell	35.0	48.0
Little Normandie, 155 E. Erie St.	Carrier-Crone	5.0	5.50
Lowell Restaurant, 4014 Milwaukee	Kelvinator-M. & M.	10.0	10.75
M. & C. Cafeteria, 3900 W. Madison St.	U. S. Air-Cond.	0.0	8.0
Mandel Brothers, 1 N. State St.	Baker-Burge	10.0	11.50
Marie's, 1939 N. Milwaukee	Kroeschell-Chilled Water	60.0	10.0
Marquis Restaurant, 1133 Lawrence Ave.	Trane	5.0	5.25
Marquis Restaurant, 1162 N. Clark St.	Carbondale-Witten	10.0	11.50
Martin's, Inc., 141 W. Jackson	Frick-Midwest	7.50	8.25
Marty's Grill, 936 Diversey Parkway	Vilter	7.50	8.50
Minck's Restaurant, 4759 N. Kedzie	Frigidaire-Kohlman	15.0	16.50
Monti Cristo, 645 N. St. Clair St.	Lipman-Adv. Heating	10.0	12.0
Mundane, Peter, 211 S. Wells	Baker-Burge	30.0	33.0
National Way Cafe, 312-14 S. Wabash	York-West. & Camp.	15.0	17.0
New Lawrence, 1016 Lawrence	Reliance-Reliable	5.0	6.0
O'Be's Bar-B-Que, 56 W. Division	York-West. & Camp.	40.0	47.0
O'Connell's Restaurant, 1031 N. Rush St.	Frigidaire-Kohlman	5.0	5.50
O'Sullivan & Barrett, 7656 S. Halsted St.	Gen. Ref.-Douglass	5.0	5.75
Peter Pan, 1133 Bryn Mawr	General Electric	10.0	11.50
Pete's Steaks, 163 N. Dearborn	Brunner-Twist	3.0	3.25
Phelps & Phelps, 6324 Woodlawn Ave.	G-E-Adv. Heating	5.0	5.25
Pit, The, 875 N. Rush	York-West. & Camp.	20.0	20.0
Powers, Walter Co., 1508 E. 53rd St.	Kelvinator-M. & M.	5.0	5.50
Presto, 5529 W. Lake St.	Baker-Burge	10.0	10.75
Pump Room, The, 1301 N. State	Baker-Burge	7.50	8.25
Rembrandt Rest., 2758 W. North Ave.	Vilter	10.0	11.50
Rendezvous, 512 Diversey	Carrier-Air Comfort	10.0	12.0
Ricketts, 1004 N. Clark	Reliable	30.0	30.0
Ricketts, 103 E. Chicago (Add'l)	Frigidaire-Bercht.	12.50	14.0
Rieck, E. W., 160 N. State	York-West. & Camp.	3.0	3.0
Rowie's, 24 E. Jackson	G-E-Adv. Heating	6.0	7.0
Rupneck Restaurant, 1127 Thorndale	Frick-Midwest	7.50	8.50
S & S Restaurant, 3154 Lawrence	General Electric	15.0	18.25
Schiller Restaurant, 1367 N. Clark	Trane-Killingstad	6.0	6.50
Schlesinger-Nathan, 4001 W. Roosevelt	General Refrigeration	7.50	8.25
Shepards, 6513 S. Halsted	Merch. & Evans-Blakeaire	15.0	17.0
Sheridan Restaurant, 3946 Sheridan Rd.	General Electric	5.0	5.50
Shore Restaurant, 2360 E. 71st St.	Mills-Larkin	10.0	10.75
Siegel's Restaurant, 4943 N. Sheridan Rd.	York-West. & Camp.	3.0	3.0
Stevens Hotel, S. Michigan-Balbo	Reliable	20.0	23.0
Sunny Boy Bar-B-Que, 7011 N. Western	Acme-Carrier	15.0	17.0
Swedish Village, 3307 N. Clark	F-M-Hanley	20.0	21.0
Tee's Open Kitchen, 6751 Sheridan Rd.	Frigidaire-Northtown	25.0	29.0
Thompson, John R., 12-18 W. Jackson	York-West. & Camp.	5.0	5.75
Thompson, John R., 63rd St.	Frigidaire-Northtown	5.0	5.75
Vary's Grill, Lee, 209 N. Wabash Ave.	Gen. Refrig. Assm.	15.0	18.0
	Merch. & Evans-Blakeaire	7.50	8.25
	Reliable	15.0	15.0

(Continued on Page 19, Column 1)

Chicago 1939 Installations (Cont.)

(Continued from Page 18, Column 4)

Washington, Earl, 104 E. 51st St.	General Electric	3.0	3.50
Webb's Restaurant, 327 S. LaSalle	West-Kroeschell	25.0	28.0
Wonder Bar, 226 S. Wabash	Baker-Burge	15.0	15.0
Woolshire Restaurant, 2107 E. 71st St.	Copeland	7.0	8.0
Yellins, 4059 Roosevelt	Kelvinator-M. & M.	5.0	5.50
Ye Old Cellar, 322 N. Michigan	Carrier-Air Comfort	15.0	18.0
Yes, Yes, Cocktail, 114 S. State	Reliable	10.0	11.50

STORES, CANDY

Andes Candies, 4801 Lincoln	Frigidaire-Kohlman	5.0	5.75
Andes Candies, 5959 W. North	Frigidaire-Kohlman	3.0	3.25
Curtiss Candy, 2544 E. 79th St.	York-Harper-Barce	5.0	5.50
Dutch Mill, 3532 Broadway	Frigidaire-Kohlman	5.0	5.75
Dutch Mill, 1500 E. 53rd St.	Frigidaire-Kohlman	5.0	5.75
Mrs. Stevens, 4000 W. Madison	Mills-Ref. Maintenance	5.0	5.50
Mrs. Stevens, 29 E. Jackson	Frigidaire-Ref. Maint.	3.0	3.25

STORES, CLOTHING DEPARTMENT

Ann & Rita Vogue Shop, 220-1/2 E. 55th St.	Frigidaire-Wendt	3.0	3.0
Bond Clothing Co., 6339 S. Halsted	Frick-Midwest	30.0	35.0
Cooper, Mort, 161 N. State St.	Frigidaire-Kohlman	10.0	11.50
Erle Clothing, 837 E. 63rd St.	West-Kroeschell	15.0	15.0
Father & Son, 6305 S. Halsted	Kelvinator-M. & M.	3.0	3.25
Gately & Wheeler, 6504 S. Halsted	Kelvinator-M. & M.	7.50	8.50
Gaytime Frocks, 23 W. Washington	Gen. Ref.-Adv. Heating	5.0	5.75
Greenbaum, Sally, 530 N. Michigan	Carrier-Wendt-Crone	7.50	8.25
Ill. Dress Co., 337 S. Franklin	Carrier-Brown	5.0	5.75
Jerome Millinery, 4052 W. Madison	G-E-Adv. Heating	5.0	5.75
Katz Millinery, 2766 Milwaukee Ave.	Carrier-Adv. Heating	5.0	5.75
Mandel Bros. 3rd Fl., 1 N. State St.	Kroeschell	0.0	20.0
Mitchell Bros., 337 S. Franklin	Carrier-Brown	3.0	3.25
Neumode Hosiery, 4048 W. Madison	Frigidaire-Assembled	3.0	3.0
Neumode Hosiery, 7180 W. Grand Ave.	Frigidaire-Kohlman	3.0	3.25
Reich Dress Shop, 325 W. Jackson	Carrier-Air Comfort	5.0	5.75
Richmond Bros., 114 S. State St.	Frick-Midwest	40.0	40.0
Sally Frocks, 2754 N. Milwaukee	Frick-Adv. Heating	10.0	11.0
Sears, Roebuck, 4786 Irving Pk.	York-Mehr-Hansen	200.0	216.0
Wollman & Co., 337 S. Franklin	Carrier-Air Comfort	2.0	2.0

STORES, DRUG

Barker's Pharmacy, 1100 W. Argyle	Frigidaire-Wendt-Crone	15.0	16.50
Berman Drug Co., 3462 W. Lawrence	General Electric	5.0	5.25
Click Drug Co., 3657 W. Lawrence	Carrier-Ehrlich	5.0	5.50
Lasky Drug Co., 100 N. LaSalle St.	Carrier-Air Comfort	7.50	8.0
Lee's Drugs, 8359 Broadway	Kelvinator-M. & M.	3.0	3.50
Liggett's, 2 S. State St.	Lipman-Gen. Ref.	10.0	10.0
Liggett's, 194 N. State St.	General Refrig.	15.0	17.0
Metropolitan, 3501 Lawrence Ave.	General Electric	5.0	5.25
Noskin, 7239 Sheridan Rd.	Carrier-Air Comfort	3.0	3.25
Porter, Hannah, 1065 W. Granville	York-West. & Camp.	6.0	7.50
Portes Drug, 5601 W. Madison	Frigidaire-Kohlman	5.0	5.75
Reel's, 760 E. 79th St.	General Electric	1.50	1.50
Ribacks, 2257 Foster	Gen. Refrig.-N. Shore	5.0	6.0
Steinway Drug, 1168 N. Clark	General Refrig.	10.0	11.0
Steinway Drug, 3958 W. Jackson	Lipman-Gen. Refrig.	10.0	11.50
Steinway Drug, Wacker-Wabash	Trane-Douglass	40.0	46.50
Steinway Drug, 415 Belmont (Add'l)	G-E-Air Conditioning	3.0	3.25
Victor, 2001 Howard (Add'l)	Airtemp	3.0	3.50
Von Hermann, 141 Jackson	Wittenmeier	20.0	3.0
Walgreen Drugs, 7100 S. Jeffery	Lipman-Assembled	5.0	5.50
Walgreen Drugs, 1 W. Division St.	General Refrigeration	10.0	11.0
Walgreen Drugs, 3201 Lawrence	Frigidaire-Kohlman	5.0	5.75
Walgreen Drugs, 2801 Broadway	Frigidaire-Wendt-Crone	10.0	11.50
Walgreen Drugs, 6257 Ellis Ave.	Frigidaire	5.0	5.50
Walgreen Drugs, 2369 N. Clark	Frigidaire-Kohlman	5.0	5.75
Walgreen Drugs, 5973 W. Madison	Frigidaire-Kohlman	5.0	5.50
Walgreen Drugs, 3960 W. Madison	General Refrigeration	10.0	11.50
Walgreen Drugs, 3959 W. North Ave.	Frigidaire-Kohlman	5.0	5.75
Walgreen Drugs, 4760 Sheridan Rd.	Frigidaire-Kohlman	5.0	5.75
Walgreen Drugs, 41 S. State St.	General Refrigeration	10.0	12.0
Walgreen Drugs, 1000 Rush St.	Frigidaire-Kohlman	5.0	5.75
Walgreen Drugs, 11100 S. Michigan	Frigidaire-Kohlman	5.0	5.75
Walgreen Drugs, 759 E. 79th St.	West-Kroeschell	5.0	5.75
Walgreen Drugs, 3179 W. Madison	Frigidaire-Kohlman	5.0	5.75
Walgreen Drugs, 5600 W. Madison	Frigidaire	5.0	5.75
Walgreen Drugs, 151 N. State	York-West. & Camp.	55.0	63.0
Whelan Drugs, 6301 S. Halsted	York-West. & Camp.	10.0	13.0
Whelan Drugs, 6258 S. Kedzie	York	5.0	5.50
Whelan Drugs, 5960 W. Roosevelt	York-West. & Camp.	5.0	5.50

STORES, FOOD

A & P, 2624 N. Pulaski Rd.	Carrier-Air Comfort	10.0	11.0
A & P, Howard St.	Carrier	10.0	11.50
A & P, 549 Diversey Ave.	Carrier	3.50	4.75
Brennen Bake Shop, 3207 Irving Pk.	Howe	2.0	2.0
Dainty Maid, 2413 W. 63rd St.	Burge Ice Mach. Co.	3.0	3.50
Davidson, 1617 Howard St.	Airtemp	3.0	3.25
Davidson's Bakeries, 1122 Argyle	Kelvinator-M. & M.	1.50	1.50
Davidson's Bakeries, 7006 N. Clark	Kelvinator-M. & M.	1.0	1.0
Davidson's Bakeries, 2007 Howard	Kelvinator-M. & M.	1.50	1.50
Davidson's Bakeries, 6548 Sheridan	Kelvinator-M. & M.	1.50	1.50
Dinkel's Bakery, 3327 N. Lincoln	Curtis-Nat'l Korectaire	5.0	6.0
Dinkel's Bakery, 3327 Lincoln (Add'l)	Curtis-Nat'l Korectaire	2.50	2.50
Dressel Bakery, 1237 W. 79th St.	Mills-Thompson	7.50	9.0
Heinemann Bakery, 4700 N. Kedzie	Gen. Ref.-No. Shore	5.0	5.50
Schlosser Bakery, 4771 Lincoln	Carrier-Air Comfort	2.0	2.25
Schlosser Bakery, 5522 Belmont	Carrier-Air Comfort	3.0	3.25
Schlosser Bakery, 4829 Irving Pk.	Carrier-Air Comfort	5.0	5.0

STORES, FUR

Barth, Charles, 190 N. State St.	Airtemp-Baldwin	0.75	0.75
Bobinski Furs, 1031 E. 63rd St.	York-West. & Camp.	8.0	8.50
Elhorn Furrier, 939 E. 63rd St.	York-West. & Camp.	5.0	5.50
Greenberg & Gelfand, 163 N. Michigan	Kelvinator-M. & M.	1.50	1.50
Labich Bros., 1815 Irving Pk. Rd.	Carrier-Air Comfort	6.0	6.50
Mandel Bros 14th Fl., 1 N. State St.	West-Kroeschell	5.0	5.75
Maurice Silvery Fur Co.	Ilg	1.0	1.0

STORES, SHOE

Feltman-Curme, 7855 S. Halsted St.	Frigidaire-Kohlman	3.0	3.50
Joseph's Shoe Salon, 2350 E. 71st St.	Kelvinator-M. & M.	5.0	5.75
Nunn Busch Shoes, 32 W. Jackson	Frigidaire-Kohlman	3.0	3.0
Red Cross, 22 W. Adams St.	Kelvinator-M. & M.	2.0	2.25
Segal Shoe Store, 2716 W. Division	Carrier-Air Comfort	5.0	5.50

STORES, MISCELLANEOUS

Arnold's Bag Co., 534 N. Michigan	York-West. & Camp.	6.0	7.50
Brown, Jack, 145 S. Wells St.	Frigidaire-Wendt-Crone	15.0	16.50
Commonwealth Edison, 4231 W. Madison	Kelvinator-M. & M.	30.0	35.0
Congoleum-Nairn, 666 Lake Shore Dr.	Kelvinator-M. & M.	25.0	30.0
Drake Hotel Florist, 140 E. Walton Pl.	General Electric	3.0	3.0
Eastman Kodak Co., 133 N. Wabash Ave.	Frigidaire-Wendt-Crone	20.0	25.0
Electric Shop, 72 W. Adams St.	Bruns-Kroeschell	160.0	212.0
Glabman Bros., Inc., 900 W. Roosevelt	West-Kroeschell	40.0	46.0
Lyon & Healy, 241 S. Wabash	Carrier-Air Comfort	15.0	17.0
Ruben Raft Club, 359 W. Madison St.	Carrier-Air Comfort	5.0	5.50
Straus & Schram, 4041 Milwaukee	G-E-Adv. Heating	50.0	64.50

STUDIOS

Sears, Roebuck, Arthington-Homan	West-Kroeschell	1.0	1.0
WLS Radio Studio, 1230 W. Washington	West-Kroeschell	15.0	19.50

THEATERS (Electric Refrigeration)

Admiral Theater, 3934 Lawrence	Wittenmeier	150.0	150.0
Amo Theater, 436 E. 61st St.	Vilter	50.0	68.0
Highway Theater, 6319 S. Western	York-West. & Camp.	50.0	65.0
Liberty, 3705 Fullerton Ave.	West-Kroeschell	40.0	47.50
Marquette, 3149 W. 63rd St.	York-West. & Camp.	50.0	57.50
Marshall Square Theater, 2205 Marshall Blvd.	Wittenmeier	96.0	132.0
Maryland Theater, 853 E. 63rd St.	Wittenmeier	100.0	170.0
McVickers Theater, 25 W. Madison St.	Kroeschell-E. V. Hill	150.0	399.0
Panorama, 717 Sheridan Rd.	Reliance-Blakaire	35.0	35.0
Pantheon Theater, 4642 Sheridan Rd.	Bruns-Kroeschell	100.0	260.0
Roads Theater, 3723 W. Roosevelt Rd.	Vilter	30.0	30.0
Roosevelt, 100 N. State St.	Bruns-Kroeschell	100.0	187.0
State & Lake (Repl.) 190 N. State St.	West-Kroeschell	160.0	160.0
Telenews, 167 N. State St.	West-Kroeschell	50.0	65.0
Terminal, 3315 Lawrence Ave.	West-Kroeschell	150.0	185.0
West Theater, 2737 W. Cermak Rd.	West-Kroeschell	50.0	55.0

Total—333 Installations 4,765.00

Conditioner Salesmen
Use 'Clean Air' Story
In Sales Approach

(Continued from Page 18, Column 3)

customer's mind first. While making his opening remarks, he is taught to "size up" the interior of the office, in order to determine what ventilating unit would be best suited for the particular situation.

The salesman asks, "Do you have a ventilating system?—No?" He then launches into a conversation designed to get the executive dissatisfied with his present situation. There is too much noise—the air is dirty—dust and smoke come in from outside. He points out that the executive works seven months of the year with his supply of fresh air shut off, and calls attention to the fact that the office has modern furniture, lighting, and up-to-date business machines.

Emphasizing the "sanitation" or "cleanliness angle" the salesman tells his prospect that no business man would think of coming to work without clean clothing—immaculate linen—but that he is forced to breathe dirty air, that has been used "over and over again—perhaps by a great many people."

The customer is shown Bureau of Health (Federal) reports, showing how clean air increases efficiency—the salesman suggests that the prospect stand outside his own office any night and hear the remarks made by employees as they leave the building. "It's good to get a breath of fresh air—gosh that place was stuffy" and similar remarks.

PRESENTING THE PRODUCT

By this time, Mr. Thomas reports, the customer is interested in what the salesman has to say. The next move is to compare conditions in the prospect's office with several owners of Carrier room ventilators—and tell how these men have benefitted from using the machines. If the salesman is smart, Mr. Thomas states, he can fish around until he finds some owner that is an acquaintance of the prospect, and this puts the whole transaction on a better basis.

The salesman next presents the Carrier ventilator, reading from a leaflet and shows the prospect how simply and easily the undesirable conditions in his office can be overcome. (The salesman still has not tried to "sell" the unit.)

The prospect demands, "How much do these things cost?"

The salesman is taught to duck this one and reply, "I have not asked you to buy, but in case I should—where would you have in mind using it?" The prospect's interest is turned to the actual application of the machine.

APPROVAL IS ASSURED

Finally the salesman says, "Here is our proposition—you have never seen one of these units and we don't want you to buy a pig in a poke—you can't possibly know what it will do for you until you have had the satisfaction of using it. The machine will cost \$108.94 installed—ready to use, but we will loan it to you for five days—properly installed in your window. We will make the trial installation for \$8—and if you accept the unit, this amount will apply on the purchase price."

At this time the salesman starts talking as if the customer had accepted the "trial" order and asks, "Don't you think a mahogany unit would look best in this window? What time tomorrow would you like to have our man make the installation?"

In presenting the trial order form to the customer for initialing or signature, the salesman assures the prospect that the unit is brand new—has never been used before, and that the company will assume the removal of it if the customer does not want to keep it. This ends the first interview.

According to Mr. Thomas the secret of making the trial stick is the demonstration. On the pretext of "showing the customer how to use the machine" the salesman calls back the day after it is installed. He shows the prospect how to turn the rheostat, regulate the airflow, operate the switches. What the salesman actually does at this time is to "sell the customer the unit." The

(Concluded on Page 20, Column 1)

MUELLER BRASS CO.
Improved HEAT EXCHANGER

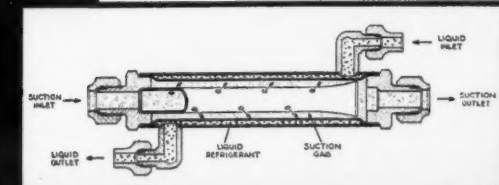
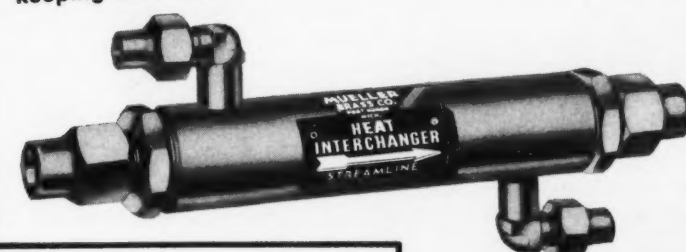
Compact and Efficient For Ice Cream Cabinet Installation

● The Heat Exchanger illustrated below is an addition to our line and intended for use in ice cream cabinet work and in similar installations where a small, compact, yet very efficient heat exchanger is required. Note that overall length is only 8 1/4".

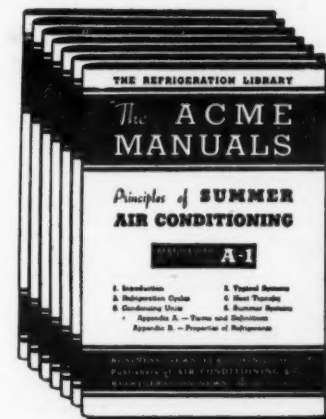
It is designed to provide maximum heat exchanging capacity where available space is at a premium. Special combinations of inlet and outlet fittings can be furnished so that this compact unit can be adapted to your particular requirements.

Catalog No.	Suction Line	Liquid Line	Overall Length	Heat Transfer Area
A-13730	1/2" Flare	1/4" Flare	8 1/4"	18 Sq. In.

Flare Nuts and Seals are furnished with Exchanger, thus keeping units dry and clean.

MUELLER BRASS CO.
PORT HURON, MICH.

If you want to know more about air conditioning

A wealth of information in
these inexpensive manuals

This set of seven manuals comprises a very interesting and informative course of study covering the various phases of air conditioning. They cover the subject from design to installation. They have been written particularly for the benefit of those who have an understanding of the principles of mechanical refrigeration but who desire to educate themselves in the entire subject of air conditioning.

The subjects covered include summer air conditioning, winter air conditioning, design engineering, equipment development, selection of equipment, the principles of load estimate and other subjects to supply a working knowledge of this relatively new and growing industry.

Every effort has been made to boil down the entire subject to simple terms that the average refrigeration man can understand.

If you want to know more about air conditioning, we earnestly suggest you obtain these volumes either by ordering direct or through your jobber. Most refrigeration supply jobbers can supply you from stock.

PRICES AND TERMS: The set consists of seven volumes. Price \$1.00 per volume. Postage prepaid anywhere in the U. S. A. Shipped C.O.D. You pay the mailman.

GUARANTEE: Any or all of these manuals will be shipped to you on the above terms. If, at the end of 10 days you are not entirely satisfied, return the manual or manuals for which you have paid and your money will be refunded.

Business News Publishing Co.
5229 Cass Ave., Detroit, Mich.

Demonstration Closes Sales In Trial Plan

(Concluded from Page 19, Column 3) owner is asked to feel the air coming through—and smell how clean it is. He is asked, "Do you think, Mr. Prospect, that you could demonstrate this unit to a friend of yours who came in—if he happened to be interested?"

The salesman states that he will "drop back at the end of a couple days and see that everything is all right." After the second "dose" of selling, the salesman says he will be back at the end of the five-day period.

At this time Mr. Thomas instructs his salesmen never to ask for a close. Instead, they are taught to say, "Now that your office has a supply of clean, fresh air, what are you going to do about the other offices?" Mr. Thomas states that this question often leads to the sale of additional equipment, and observes that "if a specialty salesman has to find a new prospect every time he makes a sale—he is lost." Around 40% of the company's business is now coming from "repeats"—purchased by users.

ROOM COOLER 'TRIALS'

The 16 men operating for Mr. Thomas in Chicago work on straight commission—18% on small units and lower commissions on the higher priced systems. Room coolers are also sold on "trial"—the customer paying \$35 for the use of a Carrier room unit. According to Mr. Thomas, the approach on the ventilator builds many room cooler sales and has led to sales of air conditioning running up to \$4,000.

Eleven of the 16 salesmen are college men, some of whom have been former business executives. Mr. Thomas states that it is necessary to put selling air conditioning on a "dignified basis" in order to interest men of this type in the business.

Mr. Thomas' formula in operating his salesmen is "never ask a man to do something you can't do yourself." Mr. Thomas' system includes constant training, morning meetings, close supervision, daily reports, and "working with the men in the field." He attempts to meet all customers and always writes a letter to the salesman's customer, thanking him for the order. Nobody is the boss—Mr. Thomas is always available for conference and discussion.

SEES TREND TO DEALERS

Mr. Thomas believes that the sale of equipment of this kind will eventually be turned over to dealers—appliance dealers, selling refrigerators, radios, ranges, stokers, and small appliances. He has found that the dealers have to be trained—the same way salesmen are trained at present.

Salesmen do not conflict with the dealer operation. Mr. Thomas has found, because of the fact that dealers operate in the large residential areas around Chicago, and salesmen spend their time in the business and industrial districts.

During the last year, the Air Comfort sales organization has sold 500 window ventilating units, 250 room coolers, and 100 humidifying units, in addition to numerous commercial air conditioning installations—proof of the fact that Mr. Thomas has the formula for selling air conditioning, and knows how to use it.

San Antonio, Tex.

(Data compiled by San Antonio Public Service Co.)

Name and Address	Make of Equipment	Hp.
BANK		
Groos Bank, Navarro & Commerce.....	Carrier	32.5
DOCTORS AND DENTISTS		
Dr. C. E. Bosshart, Nix, Prof. Bldg.....	Westinghouse	0.5
Dr. Pat A. Horton, 430 Kings Hwy.....	York	0.75
Dr. I. S. Kahn, 128 Harrison.....	Carrier	0.75
Medical & Surgical, 215 Camden.....	Carrier	17.75
Dr. Dan Schwartzberg, 131 Taylor.....	Carrier	0.75
FUNERAL DIRECTORS		
Zizik-Kearns Undertaking Co., 822 E. Houston	Frigidaire	6.5
HOSPITALS		
Nix Hospital, 414 Navarro.....	2 Carrier	1.5
Nix Hospital Nursery, 414 Navarro.....	Carrier	0.75
HOTEL		
Robt. E. Lee Hotel, 311 W. Travis.....	Carrier	15.0
LOAN COMPANIES		
Guaranty Finance Co., 828 S. Presa.....	2 York	1.5
O'Connell Loan & Jewelry Co., 114 E. Houston	General Electric	3.0
Southern Loan Co., 712 W. Houston.....	General Electric	8.75
RESTAURANTS		
Frank Bellas Cafe, 904 S. St. Mary's.....	Carrier	5.25
STORES, CLOTHING		
Dundee Clothiers, 208 E. Houston.....	Frigidaire	11.5
National Shirt Shops, Inc., 120 E. Houston..	Frigidaire	5.75
STORES, JEWELRY		
Alamo Jewelry Co., 209 Alamo Plaza.....	Frigidaire	13.0
P. J. McNeel Jewelry Co., 322 E. Houston..	Carrier	5.0
Zale Jewelry Co., 400 E. Houston.....	Carrier	13.0
STORES, SHOE		
Baker's Shoe Store, 206 E. Houston.....	Carrier	10.0
Burt's Shoe Store, 309 Alamo Plaza.....	Frigidaire	12.5
STORES, OTHER		
Grand Silver Stores, 233 E. Houston.....	York	60.0
THEATERS		
Broadway Theater, Broadway & Terrell..	Westinghouse	81.0
Litz & Parker Theater, 427 W. Houston....	York	60.0
MISCELLANEOUS		
Associated Seeds, Inc., 502 S. Medina.....	Carrier	6.0
Gen. Geo. T. Bartlett, 309 Terrell Rd.....	Carrier	0.75
C. Baumburger, 325 W. Lynwood.....	Frigidaire	1.0
A. M. Biedenharn, 156 Thelma.....	Carrier	0.75
Carl's, 221 E. Houston.....	Carrier	4.0
W. E. Dean & Co., 522 Broadway.....	General Electric	5.5
Chas. J. Fehr, 225 W. Summit.....	Carrier	0.75
Firestone Tire & Rubber Co., 310 Broadway	Carrier	6.5
John M. Gaddis, 140 E. Rosewood.....	Westinghouse	0.5
Herman Glosserman, 434 W. Kings Hwy....	Carrier	0.75
R. N. Gresham, Alamo Nat'l Bldg.....	1 Carrier	0.75
N. B. Harris, 620 W. Kings Hwy.....	Carrier	0.75
A. L. Hernandez, 1509 W. Woodlawn.....	Carrier	0.75
C. G. Horton, 770 Kirk.....	Carrier	0.75
Hutchins Bros., 217 Alamo Plaza.....	York	10.5
Joske Bros., Alamo Plaza.....	Carrier	500.0
O. H. Jenkins, 240 W. Summit.....	Carrier	0.75
Lentz Linden Co., 214½ W. Commerce.....	1 Frigidaire	0.75
Liberty Mills, 902 Morales.....	Carrier	4.5
Longhorn Portland Cement Co. Office, Alamo National Bldg.....	General Electric	5.5
G. A. Lucchesse, 2151 W. Gramercy.....	Westinghouse	8.0
C. W. Peavey, 1109 W. Magnolia.....	Room Cooler	0.75
Pig Stand, 1942 Fredsburg Rd.....	York	7.5
S. A. Portland Cement, 1301 W. Martin....	Frigidaire	6.25
Arthur A. Seelgson, Contour Drive.....	Carrier	18.75
J. Seligmann, 106 Oakmont.....	General Electric	2.5
T. N. Smith, Jr., 212 Primera Drive.....	Coolair	0.75
Fred Straus, 121 W. Lynwood.....	Frigidaire	12.25
H. K. Webb, 410 E. Rosewood.....	Carrier	9.0
Total—53 Installations		984.25

Kansas City, Mo.

1939 COMMERCIAL INSTALLATIONS
(Data compiled by Kansas City Power & Light Co.)

Name and Address	Equipment and Installer	Tonnage	Hp.
BANKS			
Commerce Trust (Transit Dept.), 10th & Walnut.....	Westinghouse (Natkin)	28	30½
Merchants Bank, 527 Walnut.....		3	3
Park National Bank, 4632 Troost.....		12½	16
BARBER AND BEAUTY SHOPS			
Brookside Beauty Shop, 6241 Brookside...	Westinghouse	3	3½
Wally Westphal, 603 W. 48th.....		5	5½
BROADCASTING STUDIOS			
K. C. Star (WDAF), 1737 Grand Ave....		3	3½
CLUB			
Variety Club, 108 W. 18th.....		5	5½
FUNERAL HOMES			
Eylar's, Linwood & Woodland.....	Brunner (Thompson)	15	15
Mrs. C. L. Forster, 918 Brooklyn.....	Westinghouse (Natkin)	17½	19½
HOSPITALS			
Research, 2300 Holmes	G-E (Gen. Air Cond. Corp.)	2	2½
Research, 2300 Holmes	Philco-York (Columbian)	½	½
Research, 2300 Holmes	Westinghouse (Natkin)	½	¾
HOTELS			
Bray, 12th & Baltimore.....	Philco-York (Columbian)	½	¾
Bray, 12th & Baltimore.....	Philco-York (Columbian)	1½	1½
Continental, 11th & Baltimore.....	Vilter (Vilter)	120	125
Phillips, 12th & Baltimore.....	Carbondale (Dean-Hagney)	50	60
President, 14th & Baltimore.....	Carbondale (Dean-Hagney)	50	60
Stata, 12th & Baltimore.....	Kelvinator (Rich-Con)	1½	1½
Stata, 12th & Baltimore.....	Kelvinator (Rich-Con)	½	¾
OFFICE BUILDINGS			
John Deere Plow Co., 1401 W. 13th.....	York (Natkin)	60	75
Bruce Dodson, 28th & Wyandotte.....	Carrier (B-D-R)	53	69
OFFICES—DOCTORS AND DENTISTS			
1 Installation	Airtemp (Flarsheim)	1	1½
2 Installation	Carrier (B-D-R)	1½	1½
1 Installation	Kelvinator (Rich-Con)	¾	¾
1 Installation	Philco-York (Columbian)	¾	¾
1 Installation	Westinghouse (Natkin)	6	5¾
1 Installation		1	1½
OFFICES—MISCELLANEOUS (Central Installations)			
Ankorte Products, 2716 E. 14th.....	Airtemp (Flarsheim)	3	3½
Baker Ice Machine, 1625 E. Main.....	Baker (Baker)	3	3½
Battenfield Grease & Oil, 3148 Roanoke....	G-E (Gen. Air Cond. Corp.)	3	3½
Continental Oil Co., 1300 Fidelity Bldg....	Airtemp (Flarsheim)	16	17½
Griffith Dickson, 3525 Broadway.....	Brunner (Thompson)	10	12½

(Continued on Page 21, Column 14)

Nine-Zone Conditioning System Compensates For Effects of Wind & Sun

SCOTTS BLUFF, Neb.—An air conditioning system designed to "follow the wind and sun" around the structure has been installed in the Theodore Roosevelt school, formally opened here last week. Even temperatures are maintained in all rooms by a year-around system divided into nine zones.

The building, which has 24 rooms, has glass brick walls, and the air conditioning equipment is tucked away in space that would not otherwise have been utilized. Each of the nine zones possesses its own air-conditioning equipment, and if a cold blast is coming out of the north in the wintertime, the heat needs be increased only in the north zones. Similarly, cooling is stepped up only in the south zones when the sun is beating down on a hot day.

Amount of outside air drawn into the system varies with the outside temperature, to save on fuel costs.

MASTERCRAFT
ADJUSTABLE
PAD
and
CARRYING
HARNESSES

Efficient, sturdy and economical. Provides safer handling and thorough protection of refrigerators. Pad and harness are separate units and both adjustable to practically all styles and sizes of cabinets. Adjustable Pad \$9.75 each. Adjustable Harness \$6.25 each. f.o.b. Chicago.

Lettering on pad at only \$1.00 per order extra. Write for latest folder and prices on pads for refrigerators, washers, ironers, ranges, radios, etc.

BEARSE MANUFACTURING COMPANY
HOLBROOK, ILL.
3815-3825 Cortland Street, Chicago, Illinois

NEW

WHEEL PULLER

No. 5 Capacity 7" diam.

A simple, efficient tool for hard pulling jobs such as flywheels, fans and pulleys—universal for all make refrigerators. Rotating arms grip in any position—internal or external pulley—odd and even spoked wheels. Hex head power screw has narrow band to facilitate hand turning. Made of special steel, hardened and tempered. Fully guaranteed. Sold by mill supply and refrigeration jobbers.

J. H. WILLIAMS & CO.
225 Lafayette St., New York, N. Y.

WILLIAMS
SUPERIOR DROP-FORGED TOOLS
REFRIGERATION TOOLS

From 1/4 to
25 TONS
of refrigeration

Brunner Refrigerating and Air Conditioning equipment comprises air and water cooled condensing units for practically all types of commercial applications up to and including 25 tons of refrigeration... Catalog promptly on request. Brunner Manufacturing Co., Utica, N. Y., U. S. A.

BRUNNER
FOR YEARS THE SYMBOL OF QUALITY

"SO" 25th ANNIVERSARY 1915-1940

The best refrigerant yet developed for home use

No other refrigerant has so many points in its favor, so great a performance record, so wide a use. Ansul sulphur dioxide, a guaranteed anhydrous gas, is non-inflammable, non-explosive, non-corrosive. Its pungent odor serves as its own warning agent and makes even the smallest leaks easy to detect. It is still the most ideal refrigerant for the home refrigerator.

ANSUL CHEMICAL COMPANY
Marquette, Wisconsin AC-21

ANSUL SULPHUR DIOXIDE
EACH CYLINDER INDIVIDUALLY ANALYZED

LET THE ANSUL JOBBER NEAR YOU SERVE YOU BETTER

SERVEL Silver Fleet
COMMERCIAL REFRIGERATING MACHINES

"Beauty is only skin deep" . . . but under the lustrous silver surface of these sensational new Servel units, you'll find a degree of performance, economy and noise-



lessness never before available in low-pressure refrigeration. Write today for details. Servel, Inc., Electric Refrigeration and Air Conditioning Div., Evansville, Ind.

WRITE FOR OUR 1940 CATALOG

FOR Better Coolers

New catalog shows our improved line of Direct Draws, Dry Kool Beverage Coolers, Bottle Coolers, Walk-In Coolers and other refrigeration equipment. Dealers and distributors write to Desk 40 for catalog and particulars.

UNITED REFRIGERATOR MFG., INC.
1380 UNIVERSITY AVENUE ST. PAUL, MINNESOTA

SAVE WITH

UNITED

DRY KOOL BEVERAGE COOLERS

COIN VENDING COOLERS

THIS IS HEADQUARTERS FOR THEM

If it's coin vending coolers you want write Pelco. A variety of new advanced models in various sizes and types to choose from. 1, 2 and 3 flavor selective.

WRITE FOR CATALOG

PELCO

PORTABLE ELEVATOR MFG. CO., BLOOMINGTON, ILL.

Kansas City 1939 Installations (Cont.)

(Continued from Page 20, Column 3)

Dierks Inv. Co., Dierks Bldg.....	York (York-Midwest)	2 3/4	2 3/4
Ethyl Gasoline Corp., 1917 Buchanan.....		5	5
J. C. Grover & Assoc., Dierks Bldg.....	G-E (Gen. Air Cond. Corp.)	3	3 3/4
Ashe Lockhart, Inc., 800 Woodswether Rd.....	G-E (Gen. Air Cond. Corp.)	7 1/2	9 1/2
Miller-Cooper, Inc., 228 Wyandotte.....	G-E (Gen. Air Cond. Corp.)	6	7
Peters Serum Co., Livestock Exchange.....		5	5
Price Ins. Agency, Glasgow, Mo.....	Airtemp (Flarsheim)	3	3 3/4
Puritan Comp. Gas, 2012 Grand.....	Airtemp (Flarsheim)	13	14 1/2
Ralston Purina, K. C. Stockyards.....	Westinghouse (Natkin)	2 1/2	2 1/2
Riss & Co., 124 West 4th.....	Carrier (B-D-R)	8	8 1/2
Seiolitz Paint Co., 18th & Garfield.....	York (Dean-Hagney)	10	12
Sheffield Steel, 7107 Wilson Rd.....		25	25
Kenreth Smith, 3038 Gillham.....	G-E (Gen. Air Cond. Corp.)	2	2 1/4
*United Artists, 223 W. 18th.....	Westinghouse (Natkin)	12	6 1/2
*United Film Ad, 2445 Charlotte.....	Westinghouse (Natkin)	11	13 1/2
Universal Pictures, 214 W. 18th St.....	Westinghouse (Natkin)	10	13 1/2
Vendo Co., 505 W. 25th St.....	Frigidaire (Carter-Waters)	10	11
Washburn-Crosby, Dwight Bldg.....	Carrier (B-D-R)	15	20

OFFICES—MISCELLANEOUS PRIVATE

1 Installation.....	Airtemp (Flarsheim)	1 1/2	3 1/4
14 Installation.....	Carrier (B-D-R)	10 1/2	10 1/2
2 Installation.....	G-E (Gen. Air Cond. Corp.)	2	2 1/2
17 Installation.....	Kelvinator (Rich-Con)	13	13
10 Installation.....	Philco-York (Columbian)	6 1/4	6 1/4
5 Installation.....	Westinghouse (Natkin)	3 1/2	4 1/2
3 Installation.....		4 1/2	4 1/2

PUBLIC BUILDING

Federal Courts Bldg., 815 Grand.....	York (Interstate)	200	275
--------------------------------------	-------------------	-----	-----

RESTAURANTS, BARS, AND NIGHT CLUBS

B-Sing-Young, 415 Alameda Rd.....	G-E (Gen. Air Cond. Corp.)	5	6
Ray Gehr, 3931 Main.....	Copeland (Copeland)	7 1/2	8 1/4
C. L. Gibson, 2628 East 15th.....	Copeland (Copeland)	2	3 1/4
Dale Hopper, 926 Grand Ave.....	York (York-Midwest)	7	7 1/2
Jay's Lunch, 1725 McGee.....	Copeland (Copeland)	3 1/4	3 1/4
Municipal Airport Terminal.....			
Municipal Airport.....	F-M (Dean-Hagney)	20	25
Sansone's Grille, 3924 Main.....	Copeland (Copeland)	3	3
Sidney's Inc., 900 Broadway.....	Airtemp (Flarsheim)	2	10 1/2
Smith Bros., 1629 Grand.....	Copeland (Copeland)	3	3
Terminal Cafe, 5th & May.....	Kelvinator (Rich-Con)	5	6 1/2
Weiss' Cafe, 1215 Baltimore.....	F-M (Natkin)	20	22
Fred Worth, 1108 Baltimore.....	Kelvinator (Rich-Con)	5	5 1/4

STORES—DEPARTMENT

Harzfeld's, 11th & Main.....	Vilter (U. S. Eng.)	216	288
Montgomery Ward, 6200 St. John.....	York (York-Midwest)	3 1/2	3 1/2
*Palace Clothing, 12th & Grand.....	Westinghouse (Natkin)	8	5
*F. W. Woolworth, 1105 Main.....	York (York)	9	11

STORES—RETAIL MISCELLANEOUS

Ethel Bentley, 116 W. 47th.....	Airtemp (Flarsheim)	3	3 1/4
*Cricket-West, Inc., 108 W. 47th.....	Westinghouse (Natkin)	6	6
Dean-Hagney, 1338 McGee.....	Carbondale (Dean-Hagney)	5	6
Hall Brothers, 111 East 11th.....	Carrier (B-D-R)	5	5 1/2
Lou Hoffman Fur Co., 11th & McGee.....	Brunner (Thompson)	10	12 1/2
Mace-Watch Dept., Union Station.....	Westinghouse (Natkin)	7 1/2	8 1/4
Radiolab, 1515 Grand.....	Kelvinator (Rich-Con)	3	3 1/4
*Richmond Bros., 1013 Main.....		5	5
Sherwin-Williams Paint, 1520 Grand.....	York (Dean-Hagney)	10	12
Stover's Bungalow Candy.....			
Linwood & Forest.....	Kelvinator (Rich-Con)	7 1/2	8 1/2
Stover's Bungalow Candies, 3601 Broadway.....	York (York-Midwest)	2 1/2	2 1/2
Toy Lee Laundry, 3307 Main St.....	Copeland (Copeland)	3 1/4	3 1/4
*Van Dyke Fur, 1113 McGee.....	Carrier (B-D-R)	5	5 1/2
Miriam Zide Gift Shop, 213 West 47th.....	F-M (Dean-Hagney)	1	1

THEATERS

Fox Isis, 3102 Troost.....	Vilter (Vilter)	80	80
Fox Lincoln, 1332 E. 18th.....	Vilter (Vilter)	80	80

MISCELLANEOUS INDUSTRIAL

Campbell Taggart, 4034 Broadway.....	G-E (Gen. Air Cond. Corp.)	15	19
Rodney Milling, 2900 S.W. Blvd.....	Copeland (Copeland)	6	6
*Mrs. Stover's Bungalow, 1206 Main St.....	Baker (Baker)	15	..
Tri-Way Produce Co. 3465 Roanoke Rd.....	Baker (Baker)	55	76
Leland Wilson Hatchery, Merriam, Kan.....	Kelvinator (Rich-Con)	1	1

Total, Residential and Commercial.....	247 Installations	1,514.86	1,889.33
*Addition to Previous Installation.			
†Not served by Kansas City Power & Light Co.			

Sioux City, Ia.

(Data compiled by Sioux City Gas & Electric Co.)

Name and Address	Make of Equipment	Hp.
APARTMENTS		
Sam Cohen, Sioux Apartments.....	Frigidaire	0.75
Ben Sekt, Bellevue Apartments.....	Frigidaire	1.0
BANK		
Security National, 5th & Nebraska Sts....	Bryant	4.5
BEAUTY SHOP		
Harper Methods, 512 Nebraska.....	Frigidaire	0.5
DOCTORS' AND DENTISTS' OFFICES		
Dr. L. J. Dimsdale, Martin Hotel.....	Frigidaire	1.75
Dr. Arch O'donohue, Operating Room.....	Frigidaire	0.75
Dr. R. E. Crowder, Badgerow Bldg.....	York	1.75
Dr. F. L. Secoy, Davidson Bldg.....	York	2.25
Dr. G. E. Barr, Trimble Bldg.....	York	2.0
Dr. C. E. Westwood, Badgerow Bldg.....	York	0.33
Dr. L. L. Wilson, Badgerow Bldg.....	York	1.25
Dr. J. E. Reeder, Davidson Bldg.....	York	0.75
Dr. E. E. Morgan, Davidson Bldg.....	York	0.5
Dr. W. F. Harriman, Badgerow Bldg.....	York	0.75
Dr. E. E. Morgan, 427 Davidson Bldg.....	York	1.0
HOSPITAL		
St. Joseph's, Twenty-first & Court Sts....	York	0.75
HOTELS		
Mayfair, Third & Nebraska.....	Frigidaire	29.5
West Hotel, Third & Nebraska.....	York	0.75
INDUSTRIAL		
Hess Mallory, 301 Wall.....	Frigidaire	5.75
OFFICES		
Kutel Refrigeration, 120 W. 4th.....	York	0.33
John Cheever, 416 19th St.....	York	0.34
Gustafson & Nelson.....	York	2.67
Highway News Agency.....		
221 Ins. Exchange.....	York	0.33
J. C. Mullaney, 2125 Summit.....	York	0.75
W. A. Walbert Co., 623 Pearl.....	York	0.75
Grandy-Pratt-Cotton, 603 Pierce.....	York	5.5
G. H. Correll, 904 S. Paxton.....	York	0.5
PRINTING		
S. C. Tribune, 304 Pierce.....	Airtemp	3.0
RESTAURANTS		
Rorris Cafe, 801 Fourth.....	Frigidaire	1.0
New Deal Cafe, 324 W. 7th St.....	Frigidaire	5.75
Jack's Place, 513 Pearl.....	Frigidaire	5.75
Warfield Distributing Co., Egyptian Room	Frick	18.0
STORES		
Beardsley-McMullan Co., 601 Pierce St....	York	3.5
New Grand Jewelry, 627 Fourth.....	York	0.5
Barney Baron & Co., 1021 W. 7th.....	Frigidaire	1.0
Thorpe & Co., 509 Fourth.....	Frigidaire	3.0
Club Cigar Store, 420 Nebraska.....	Frigidaire	5.0
Club Cigar Store, 610 Fifth St.....	Frigidaire	5.0
Total (38 installations).....		119.25

Points the Way—



BOB KROESCHELL

Veteran Distributor
Sees Progress In
Air Conditioning

CHICAGO—"Tremendous progress will be made in air conditioning in the next few years," declares Bob Kroeschell of the Kroeschell Engineering Co., Westinghouse distributor here.

"Yes," Mr. Kroeschell continued, "I know a lot of dealers have lost a lot of money—in fact it melted away like a snowball in a furnace—but that is no indication that air conditioning is not a good business."

"I know the industry has had too much ballyhoo—and a lot of people who did not know anything about the business got burned, but our business has been built on a solid foundation of industry experience, and we don't expect to strike quicksand."

'NO SALESMEN'

Bob Kroeschell asserts that the Kroeschell Engineering Co. has no salesmen.

What Mr. Kroeschell means is that commercial air conditioning sales are handled by the company's executives and engineers who make all contacts with prospective customers.

"We don't get excited and run all over Chicago figuring jobs we have no chance of getting or those in which there is no profit," Mr. Kroeschell reports. "We have let a lot of the chain store work go by—and other jobs where the profit margin is slim. But when we do step into a job we have the right kind of engineering and lots of it—and we know how to give the customer what he should have."

SOME RECENT JOBS

Mr. Kroeschell mentioned the fact that the company had installed a system using chilled water to cool the sixth floor drafting room of the Commonwealth Edison Co. and had recently installed a 10-hp. system for the Fish St. 60-cycle switch house of the same company.

Other jobs installed during March of this year included Wilson & Bennett, offices, 25 hp.; Klaus Department Store, 40 hp.; Joseph Schultz Funeral Home, 7 1/2 hp.; Otto Ault & Son Mortuary, 7 1/2 hp.; Clearing Machine Corp. offices, 10 hp.; Inland Steel Co. offices, Precipitron air cleaning system; Bohemia Cafe, 10 hp.; and air handling systems including sheet metal work for the Chicago Tribune, Chicago Daily News, and radio station WBBM.

Mr. Kroeschell feels that the best immediate market for air conditioning in the Chicago area is in funeral homes, small department stores, office buildings, and industrial offices.

THE BUYER'S GUIDE

TYLER *Refrigerators*
WELDED STEEL

REACH-IN BOXES
WALK-IN COOLERS
VEGETABLE REFRIGERATORS
BEVERAGE COOLERS
DOUGH RETARDING BOXES

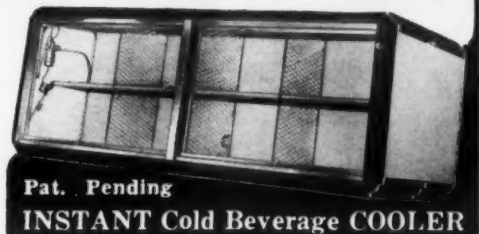
TYLER full line dealers and distributors have a big advantage. Complete line fills every food store need. In addition, there are big selling models in demand for clubs, hotels, restaurants, bakeries and public institutions. Each model built to meet a specific demand and to sell at surprisingly low prices. Welded steel construction... 100% insulation. Low operating cost challenges all competition. You can make more money with Tyler. Write for dealer proposition today.

TYLER FIXTURE CORP., Dept. E, NILES, MICHIGAN
New York Office: 601 W. 28th St. Boston Office: 683 Beacon St.
Chicago Office: 1663 W. Ogden Ave.

MUZZARELLI'S COMPLETE 1940
LINE for PROFIT

COOLERS for Bottled or canned BEVERAGES and DIRECT DRAW DRAUGHT BEER

WANTED DISTRIBUTORS
FOR A LINE THAT REALLY SELLS



OUR NEW BEVERAGE COOLER CATALOG IS NOW READY

Write for Your Copy Now

KELVINATOR REFRIGERATION

Our COOLERS are FURNISHED COMPLETE or with all equipment LESS the KELVINATOR UNIT.



E. B. MUZZARELLI & COMPANY
Main at 33d Street
KANSAS CITY MISSOURI

THE NEW KOCH
Crispeteria

One of Many outstanding Koch Products in the complete line of Koch Commercial Refrigerator Cabinets. Write for details concerning open territories.

KOCH REFRIGERATORS
NORTH KANSAS CITY, MO.

For Heavy-Duty Commercial
Applications — RANCO Type G2!

HERE'S an outstanding value for general commercial use — Ranco Type G2 Control. Pressure, Temperature and Combination units available. It's a control you can install with confidence—at a price that will make a hit with your customers. High capacity. Extreme simplicity. Built for enduring service. Ask your jobber for this outstanding Ranco value.

RANCO Inc., Columbus, Ohio, U.S.A.



Use CHICAGO SEALS
for seal replacements
A complete line in all sizes



CHICAGO SEAL CO.
20 North Wacker Dr., Chicago

SENSATION!
OF THE YEAR!
PACKAGE UNITS
SIX AND NINE FT.
\$350.00 to \$475.00
RETAIL F.O.B. FACTORY
REX EQUIPMENT CO.
MARSHALL MICH.



**Sells Faster Because
It Cools Faster!**
IDEAL SPEED COOLER
Ideal Beer Cooler Co.
2953 Easton Ave., St. Louis, Mo.

85-Ton System Designed For Mobile Dept. Store

MOBILE, Ala.—An 85-ton Carrier air conditioning system designed to cool all four floors of the C. J. Gayfer & Co. department store here, is being installed by Marine Specialty Co., at an estimated cost of \$25,000. The system is to be in operation by June 1.

Each floor will have its own individual temperature control. The system is designed to keep store temperatures down to a maximum of 80° F. and to effect a complete change of air every hour.

Water for the condensers will be supplied by a deep well which will be drilled at the rear of the building. This well will have a capacity of 175 g.p.m.

Indianapolis, Ind.

(Data compiled by the Indianapolis Power & Light Co.)

1939 COMMERCIAL INSTALLATIONS

Name and Address	Make of Equipment	Tonnage	Hp.
COMMERCIAL			
Claypool Barber Shop, Claypool Hotel....	Airtemp	3.0	3.33
Columbia Club	Airtemp	0.75	0.8
Homer Williamson, Candy Manufacturer, 814 N. Senate Ave.....	York	10.0	10.0
Dr. Haworth (Apple Storage), West Newton, Ind.....	Frick	5.0	5.5
Ne-Hi Bottling Co., 1420 N. Senate Ave....	Frick	50.0	55.0
R.C.A. Mfg. Co., 501 N. LaSalle St.....	Frigidaire	1.5	1.5
Basca Mfg. Co. office, 3019 Roosevelt Ave..	Cook (ww)	0.0	3.5
Pitman-Moore Co. office, 1220 Madison Ave..	York	30.0	36.0
Ziffirin Trucking Co. office, 1120 Division St.	York	2.0	2.5

OFFICES, PRIVATE

Dr. R. L. Arbuckle, 615 Hume-Mansur Bldg.....	Philco-York	0.33	0.33
Fred Bays, Claypool Hotel Bldg.....	Hercules	1.0	1.0
W. Stuart Busey, 17 E. St. Joseph St....	Frigidaire	0.75	0.8
C. C. Casler, c/o H. P. Wasson Co.....	Philco-York	0.5	0.5
J. J. Cole, 730 E. Washington St.....	Carrier	1.5	1.6
Thomas Kemp, 49 S. Penn. St.....	Philco-York	0.75	0.8
Lilly Varnish Co., 666 S. California St....	General Electric	1.33	2.0
Miller-Baxter Co., 445 N. Penn. St.....	Carrier	2.25	2.4
National Liquor Corp., 111 S. Pennsylvania.	General Electric	1.0	1.0
Louis Smith, 915 Circle Tower Bldg.....	Carrier	0.75	0.8
United Brotherhood of Carpenters and Joiners of America (11 offices), 222 E. Michigan St.....	Carrier	9.0	9.6

RESTAURANTS AND BARS

Claypool Tavern, 14 N. Illinois St.....	Frick	50.0	60.0
Eastgate Coffee Shop, 355 E. Washington St.....	Airtemp	3.0	3.5
Hecathorne Tea Room, 4915 N. Pennsylvania.....	York	5.0	5.75
Linden Hotel Cafe, 317 N. Illinois St.....	York	2.0	2.33
Parkmore Restaurant, E. 38th St. & Coliseum.....	E. K. Campbell (ww)	0.0	20.0
Riley Hotel Restaurant, 155 W. 16th St..	Goldenrod (a)	0.0	1.0
Scotten's Cafeteria, 5373 College Ave.....	Carrier	6.0	5.5
Spencer House Cafe, 248 S. Illinois St....	Airtemp	5.0	5.5
Spencer House Cafe (a), 248 S. Illinois St..	Airtemp (a)	5.0	5.5
Thomas Restaurant, 5530 E. Washington St.....	Own Design (CS)	3.0	1.5
Washington Hotel (Cafe George), 34 E. Washington St.....	Carrier (CV) (ww)	0.0	15.0

SHOE REPAIR SHOPS

Roy W. Steele, 15 N. Meridian St.....	York	3.0	3.5
Roy W. Steele, 149 N. Pennsylvania.....	York	10.0	11.5

STORES, DEPARTMENT AND GENERAL CLOTHING

L. S. Ayres & Co., 1 W. Washington St....	Carrier	0.75	0.8
Brooks, Inc., 26 E. Washington St.....	York	10.0	11.5
Fair Store, 311 W. Washington St.....	Carrier	20.0	21.25
Livingstones, Inc., 129 W. Washington St..	Airtemp	15.0	17.0

STORE, CONFECTIONERY

Martha Washington Shop, 5603 E. Washington St.....	Carrier	5.0	5.75
---	---------	-----	------

STORE, DRUG

Rossiter's Drug Store, 2236 E. 10th St....	York	4.0	5.5
--	------	-----	-----

STORE, JEWELRY

Dee Jewelry Co., 18 N. Illinois St.....	Airtemp	5.0	5.5
---	---------	-----	-----

MISCELLANEOUS

WIRE, Broadcasting Studio, 14 N. Illinois St.....	Airtemp	25.0	31.0
W. Stuart Busey, Photographer's Studio, 17 E. St. Joseph St.....	Frigidaire	0.75	0.8
Moore & Kirk, Funeral Directors, 5342 E. Washington St.....	York	5.0	6.0

THEATERS, WELL WATER

Esquire, 2961 N. Illinois St.....	U. S. Air Cond. Co.	0.0	25.0
Garfield, 2203 Shelby St.....	U. S. Air Cond. Co.	0.0	10.0
Rex, 3026 Northwestern Ave.....	U. S. Air Cond. Co.	0.0	8.0
Tuxedo, 4020 E. New York St.....	U. S. Air Cond. Co.	0.0	8.0
Zaring, 2741 Central Ave.....	Supreme Htg.-Cook	0.0	15.0

(CS) Combination refrigeration storage and ice.

(a) Additions to present system.

(ww) Well water system.

(CV) Converted ventilating system.

Pensacola, Fla. Area

(Data compiled by Gulf Power Co.)

Name and Address	Make of Equipment	Tonnage	Hp.
BANK			
American National Bank, Pensacola.....	Airtemp-Johnson	20.0	23.50
DOCTORS AND DENTISTS			
The Medical Center, Pensacola.....	York-Coolaire	1.0	1.75
PRIVATE OFFICES			
A. G. Campbell, DeFuniak Springs.....	Pleasantaire	0.0	0.25
Ajax Finance Corp., Pensacola.....	Pleasantaire	0.0	1.0
PUBLIC BUILDING			
U. S. Post Office, Pensacola.....	Baker-Liberty	45.0	53.25
STORE			
Rhodes-Collins Furniture Co., Pensacola..	Carrier	0.0	8.0
Total—6 Installations		66.0	87.75

Omaha, Neb.

(Data compiled by Nebraska Power Co.)

Name and Address	Make of Equipment	Hp.
HOTELS		
Athletic Club, 1714 Douglas.....	Carrier	1.66
Athletic Club, 1714 Douglas.....	Frigidaire	8.25
Conant-Sanford Hotel 19th & Farnam.....	Westinghouse	2.0
Hill Hotel, 16th & Howard.....	Westinghouse (additional)	8.0
Paxton Hotel, 14th & Farnam.....	Baker	100.0
MORTUARIES		
Crosby-Carlson-Meyer, 3154 Farnam.....	Frigidaire	10.0
Hulse & Riepen, 3224 Farnam.....	Airtemp	3.33
OFFICES		
B. Blotky, Inc., 118 N. 12th.....	Frigidaire	5.75
J. I. Brockman, 304 Karbach Block.....	Carrier	1.33
Burlington Ticket Office, 19th & Farnam..	Frigidaire	10.66
Byron Reed Co. (G.M.A.C.), Aquila Court Bldg.	Frigidaire	17.0
City Nat'l Bank Bldg., 401 S. 16th.....	Baker	52.0
Columbia Pictures, 1516 Davenport.....	Frigidaire	5.75
Independent Metal Products, 1014 Seward..	General Electric	6.0
Dr. Anton Kani, 120 N. 39th.....	Carrier	3.33
Kennedy Building, 19th & Douglas.....	Baker	50.0
Livestock Nat'l Bank, 4840 S. 24th.....	Westinghouse	3.5
Morrison & Co., 786 Brandeis Theater Bldg.	General Electric	2.0
Natkin & Co., 1729 Howard.....	Westinghouse	2.75

(Continued on Page 23, Column 1)

THE BUYER'S GUIDE

GRUNOW AUTHORIZED SERVICE, INC.

THE ONLY MANUFACTURER OF
**GENUINE CARRENE METER
ASSEMBLIES**

4313 FULLERTON AVE., CHICAGO, ILL.

**YOUR "on-the-counter"
Belt Department!**
**Gilmer's "Eye-ful" Tower
MERCHANDISER
and HANDMETER**
earns almost \$1.00 an inch PROFIT for
the 15"-circle it occupies! Costs only
\$19.36. You get \$33.28—and make \$13.92
clear profit!



L. H. GILMER COMPANY
For details write to
Tacony Philadelphia

ACCESSORIES?



YES, INDEED, YOU WILL
FIND AN EXCELLENT AS-
SORTMENT IN OUR BIG
CATALOG—AT THE RIGHT
PRICES . . . AND THOU-
SANDS OF REFRIGERA-
TION AND AIR COND-
ITIONING SERVICE PARTS,
ALSO.

THE HARRY ALTER CO.
1728 S. MICHIGAN AVENUE, CHICAGO, ILLINOIS
3 CHICAGO BRANCHES, NORTH, WEST, SOUTH

NEW YORK
BROOKLYN
JAMAICA
NEWARK
DETROIT
CLEVELAND
ST. LOUIS

THE SIGN OF FAST SELLING COMMERCIAL REFRIGERATORS

QUALITY has made SHERER'S
name a by-word with commercial deal-
ers. A complete line of sure-fire lead-
ers, plus whole-hearted factory co-
operation, demands investigation as a
profitmaker for you.

Write for dealer plan

SHERER-GILLET CO., MARSHALL, MICHIGAN

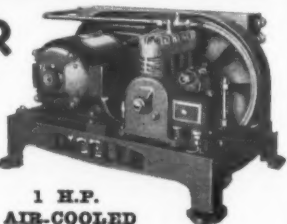
SHERER

DISPLAY AND STORAGE EQUIPMENT
FOR RETAIL FOOD STORES
SHERER-GILLET CO.
MARSHALL, MICHIGAN

DICELER 4 CYLINDER CONDENSING UNITS

For Design, Construction and Service the most
is offered by DICELER. You'll find it worth
your while to get all the facts about DICELER
compressors in both air and water cooled models
from 1/2 H.P. to 30 H.P. Write for the DICELER
catalogue and learn how you can gain greater
sales and increased profits.

THE CONDENSING UNIT LINE WITH EXCLUSIVE FEATURES
DESSLER MACHINE COMPANY Greenville, Pa.
Export Dept., 100 Varick Street, New York.
PIONEER OF FOUR CYLINDER REFRIGERATION



A MODEL FOR EVERY NEED

Widest variety of standard stock sizes
and styles in the industry.

The one-quality—all porcelain line.—

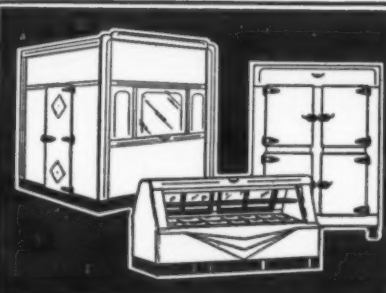
Protected by
Famous Fogel Lifetime Vision.

Hundreds of successful dealers.

Some territories still available.

INQUIRE TODAY

FOGEL REFRIGERATOR COMPANY . Since 1899
16th & Vine Sts., Phila., Pa.



KERO TEST
Valves and Fittings
The Standard of the
Industry
Kerotest Manufacturing Co.
Pittsburgh, Pa.

Filtrine
Water Coolers—Filters
Cafeteria—Industrial
Commercial Remote
Surge Tanks Pipe Coils
Filtrine Mfg. Co., Brooklyn, N.Y.

Dayton
V-BELTS
Silent, vibrationless, de-
pendable, long-lasting.
Powerful grip prevents
slippage. A nearby dis-
tributor carries a com-
plete stock for appliances
and machines.
THE DAYTON RUBBER
MFG. CO., DAYTON, OHIO
World's Largest Manufacturer of V-Belts

MAYFLOWER
Commercial Refrigeration
Compressors
made by
Hardy Manufacturing Co., Inc.
126 Davis Ave., Dayton, O.

USE McQUAY COILS
WITH THE HIGH CONDUCTIVITY
"FRICTION-GRIP" BOND
McQuay Inc.
MINNEAPOLIS, MINN.

Refrigeration and Air Conditioning
AIRO PARTS-TOOLS-SUPPLIES
Wholesale Only
SUPPLY CO.
2732 N. ASHLAND AVE
CHICAGO ILLINOIS
Write for catalog on your letterhead

For Information on Motors
FOR ALL TYPES OF
Air Conditioning and
Refrigeration Equipment
WRITE TO
Wagner Electric Corporation
240 PLYMOUTH AVE.
ST. LOUIS, MO.

There's a heap of satis-
faction when customers
are pleased.
See your jobber
TRADE MARK Rotary Seal Co., Chicago, Ill.

COMMERCIAL REFRIGERATORS
World's most complete line
of commercial cabinets—
13 to 84 cu. ft. capacity.
MIDWEST
MFG. COMPANY • GALESBURG ILL.

AE Frozen Food Lockers
Sold Only Through Dealers
Will Add to Your Income
Quickly, Easily
Write for Descriptive Folder
ALL-STEEL-EQUIP CO., INC.
105 Kensington Ave., Aurora, Ill.

CAMPBELL REFRIGERATOR CO.
Milwaukee, Wis.
Dealers Wanted for Midwestern and
Southern States

SELL BULMAN
Double your earnings by having
a complete Steel Equipment Line—
Steel Shelving—Counters—Islands—
Produce Displays for Service and
Super Markets. Write:
E. O. BULMAN MFG. CO., INC.
Grand Rapids, Michigan

Omaha 1939 Installations (Cont.)

(Continued from Page 22, Column 3)

T. R. Naughtin Co., 802 Farnam.....	Airtemp	3.33
Nolan Co., 740 Keeline Bldg.....	Airtemp	3.33
Occidental Bldg. & Loan, 18th & Harney..	York	16.0
Dr. A. J. Offerman, 4826 S. 24th.....	Frigidaire	1.0
Ohio Nat'l Life Ins. Co., 208 S. 19th.....	Carbondale	757.0
Dr. D. C. Platt, 1113 Redick Tower.....	Carrier	1.0
Petersen Baking Co., 12th & Jackson.....	York	7.0
Service Life Ins. Co., 1902 Farnam.....	Frigidaire	68.5
Dr. E. Simmons, 826 Medical Arts Bldg....	Airtemp	3.33
Socony Vacuum Oil Co., 18th & St. Mary's..	Baker	12.0
Universal Pictures, 1524 Davenport.....	Frigidaire	11.5
Universal Finance, 1440 First Nat'l Bk. Bldg.	Carrier	0.75
Wm. Volker Co., 109 S. 10th.....	Carrier	0.75
Wachob Bender Corp., 212 S. 17th.....	York	7.5
Western Pringling, 1412 Howard.....	York	1.33
Western States Grocery, 724 S. 12th.....	Baker	12.0
World Herald Bldg., 15th & Farnam.....	Airtemp	5.5
Yellow Cab Co., 619 S. 20th.....	Fairbanks-Morse	5.5

RESTAURANTS

Cinema Bar, 1412 Farnam.....	Carrier	12.5
Club Reno, 1418 Harney.....	Airtemp	3.33
Hamilton Cafe, 2406 Farnam.....	Frigidaire	5.75
Harkert House, 1720 Douglas.....	Frigidaire	5.5
Harkert House, 1420 Douglas.....	Brunner	5.5
Harkert House, 1415 Farnam.....	Williams Ice-O-Matic	3.25
Hillsdale Tavern, Hillsdale Rd.....	Airtemp	6.66
Hosman's Cafe, Penny's Basement.....	Frigidaire	12.0
Marlow's Hamburgers, 2921 Leavenworth..	Airtemp	3.33
Richter & Kennelly, 1714 Howard.....	Airtemp	5.5
Rosemont Cafe, 2401 Howard.....	General Electric	3.0

STORES

Air Conditioning Utilities, 1810 Harney....	York	2.5
Eastman Kodak Co., 1618 Harney.....	Baker	12.0
Feltman Curme Shoe Store, 1520 Farnam..	Frigidaire	3.5
Goldstein Chapman's, 317 S. 16th.....	Frigidaire	9.25
Greenleaf Motor Co., 2752 Farnam.....	Frigidaire	6.25
Greenleaf-Lied Motor Co., 2570 Farnam..	Frigidaire	4.25
Hub Liquor, 718 S. 24th.....	Airtemp	6.66
Liggett Drug Store, 16th & Harney.....	Baker	12.0
Liggett Drug Store, 4826 S. 24th.....	Baker	8.5
Logan Hotel Liquor Store, 1804 Dodge....	York	5.75
Harry Mason Clothing Co., 1512 Farnam..	Frigidaire	6.75
Phillip's Department Store, 4934 S. 24th..	Baker	52.0
Richman Bros. Clothing Co., 1515 Farnam..	Fairbanks-Morse	11.5

Total—61 Commercial Installations in 1939..... 1417.86

Total—30 Residential Installations in 1939..... 64.74

Toledo, O.

(Data compiled by Power Division, Toledo Edison Co.)

Name and Address	Make of Equipment	Hp.
BARS		
Bergers Club Bar, 515 Jefferson.....	McCray	5.75
Hillcrest Hotel (bar), 241 16th St.....	Westinghouse	49.0
CLUBS		
Eagles Home, 440 Erie St.....	Westinghouse	22.0
Kentucky Club, 3835 Detroit.....	York	11.5
DRESS SHOP		
Alvin's Dress Shop, 406 Summit.....	Westinghouse	5.75
HOTEL		
Webster Inn, Dixie Highway.....	Westinghouse	49.0
MISCELLANEOUS		
Bell Building, 705 Madison.....	Westinghouse (additional)	25.0
Electric Auto Lite, Champlain St.....	Airtemp	11.0
Franklin Ice Cream Co., 2103 Lawrence....	Frigidaire	5.75
Hausman Steel, 300 Sandusky.....	York	6.75
S. S. Kresge, 401 Adams St.....	Carrier	122.5
LaSalle & Koch's, 513 Adams.....	Kelvinator	37.0
Nisley Shoe Co., 510 Adams St.....	Carrier (used)	4.5
Spicer Mfg. Co., Bennett Rd.....	Frigidaire	11.0
PUBLIC BUILDING		
Toledo Public Library, Madison & 10th..	Carrier	390.0
RESTAURANTS		
Elpinto Grill, 2472 Collingwood.....	York	5.75
Parkdell Restaurant, 3992 Monroe.....	Universal	5.75
Wayne Grill, 1943 Wayne.....	York	5.75
STORES, DRUG		
Boyd's Drug Co., Sylvania, Ohio.....	York	2.33
Boyd's Drug Co., Maumee, Ohio.....	York	2.33
Nolins Drug Co., 3998 Monroe St.....	Kelvinator	3.33
THEATERS		
Loop Theater, 417 Superior.....	Theater Supplies	35.0
State Theater, 2466 Collingwood.....	H. C. Baker (deep well)	27.5
Total—23 Installations.....		
844.25		

Akron, O.

(Data compiled by Ohio Edison Co., Akron Division)

Name and Address	Make of Equipment	Hp.
CLUB		
Barborton Lodge No. 982 BPO, 542 W. Park St., Barborton.....		8.0
FUNERAL PARLOR		
Campfield Hickman Co., 566 Park, Barborton		8.0
OFFICE		
International Business Machines, 29 E. Exchange St.....	Westinghouse	15.66
RESTAURANTS		
E. L. Menke, 130½ S. Main St.....		4.0
Henry Hilgert, 20 W. Bowery St.....	Carrier	5.33
STORES		
F. W. Woolworth, 76 S. Main St.....	York	110.66
Richman's Clothes, 183 S. Main St.....	Westinghouse	26.66
Bond Clothes, 171 S. Main St.....		12.0
Total—8 Installations.....		
183.31		

Joplin, Mo.

(Data compiled by The Empire District Electric Co.)

Name and Address	Make of Equipment and Installer	Hp.
DRUG STORE		
McCool's Drugs, Fourth & Joplin Sts.....	Carrier-Orin Eng. Co.	7.0
HOTEL		
Connor-Rendezvous.....	Vilter	35.0
OFFICES		
Spiva Bldg., West Fourth St.....	Carrier-Orin Eng. Co.	10.0
Eagle-Picher Research Lab., Joplin Smelter	Carrier-Orin Eng. Co.	36.0
Total—4 Installations.....		
88.0		

10 Cabinet-Type Air Conditioner Units
Developed In Germany For Room Use

BERLIN—Ten different sizes of air conditioner cabinets have been developed in Germany for conditioning rooms, ranging in size from 50 to 1,000 cubic meters, the office of the American commercial attache here reports.

Construction of the units is said to be very compact. Those handling 700 cubic meters of air per hour

have a base of only .6 square meters and are 1.8 meters high, while a 1,000 cubic meter per hour unit has a base of 1.6 square meters and a height of 2.6 meters.

The cabinets house a filter, cooler, washer, drier, heater, water pump, and fan. These parts are all readily accessible, it is reported. They are primarily intended for industrial air conditioning, where large installations made to specification are not necessary.

A refrigerating unit keeps the temperature of the tank water at between 6 and 8° C., and is governed by a thermostat. The water system is in most cases self-contained. Drops of water suspended in the air current leaving the spray chamber are retained by ceramic rings. Heating of the washed air, if necessary, is done by electricity or hot water.

CLASSIFIED
ADVERTISING

RATES: Fifty words or less in 6-point light-face type only, one insertion, \$2.00, additional words, four cents each. Three consecutive insertions, \$5.00, additional words ten cents each.

PAYMENT in advance is required for advertising in this column.

REPLIES to advertisements with Box No. should be addressed to Air Conditioning & Refrigeration News, 5229 Cass Ave., Detroit, Mich.

POSITIONS AVAILABLE

COMMERCIAL REFRIGERATION Salesman—Wonderful opportunity for experienced man to make himself some real money. High rate of commission paid. Wanted by a leading refrigeration organization in large size eastern city. Reply Box No. 1228, Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

BRAND NEW ¼—¼—¼—¼ H.P. 25 and 40 cycle motors, capacitor type cradle base for sale individually or in lot. Contact ASSOCIATED REFRIGERATOR PLANT, INC., 3028 W. Hunting Park Ave., Philadelphia, Pa.

MY CLIENT, a retired refrigerator manufacturer, desires to re-enter the refrigeration industry. He is interested in financing the manufacture of any worth while commodity related to refrigeration or air conditioning, particularly the manufacture of items covered by patents or patents pending. Write: CHARLES PINCUS, Attorney, 9 E. 40th Street, New York City.

HERMETICALLY SEALED refrigeration pump patents. Ten for sale, or any part. Consider royalty basis. Priority patent dates offer excellent patent protection. We have small units with six years running time. Definitely past experimental stages. Write: WM. DRYSDALE, Inventor and Engineer, 829 Westchester Road, Grosse Pointe Park, Mich.

FRANCHISES AVAILABLE

DIRECT FACTORY CONNECTION. Sell refrigerated display cases, walk-in coolers, reach-in refrigerators, refrigerating units, to meat markets, grocers, taverns, etc. Financing arrangements to help sell. Write Dept. A for full information or see EHRICH REFRIGERATOR MFG. CO., St. Joseph, Mo.

EQUIPMENT WANTED

WE BUY SURPLUS, discontinued stock of refrigeration parts, controls, gauges, expansion valves, valves, regulators, compressors, units, evaporators, belts, trays, hardware, fittings, motor parts, condensers, and motors. Submit quantity and price or send sample. ADAMS SUPPLY CO., 2074 Webster Ave., New York, N. Y.

REPAIR SERVICE

G. E. DR1-DR2—\$27.00; Domestic Westinghouse \$27.00; one year unconditional guarantee. Place order for any model G. E. or Westinghouse sealed unit. Shipment will be made from stock same day. Return old unit later. Our production line turns out completely rebuilt sealed units mechanically comparable to manufacturer's with replacement service inferior to none at prices that enable you to realize profit on resale. Send for Complete replacement schedule. REX REFRIGERATION SERVICE, INC., 2226 S. State, Chicago, Ill.

CONTROL REPAIR service. Your controls repaired by expert mechanics, with special precision equipment. Supervised by graduate engineers. We stress perfection and dependability before price. One year guarantee on domestic controls. Any bellows operated device repaired. HALELECTRIC LABORATORY, 1793 Lakeview Road, Cleveland, Ohio.

CONTROLS RECONDITIONED like new. Precision work by experts. "Years of Satisfied Customers," our motto. All work guaranteed for one year. Try us and be convinced of our unexcelled service. Special prices in quantity lots. For further information write: UNITED REPAIR CO., INC., 342 W. 70th St., New York City.

GENERAL ELECTRIC DR1-DR2 Monitor Top units exchanged \$27.50 F.O.B. our factory. Send your defective unit. On receipt we make immediate shipment of completely rebuilt, refinished unit with one year guarantee. Like new in every respect. Westinghouse and other hermetically sealed units, prices on request. MACKLAM REFRIGERATOR SALES & SERVICE CORP., 220-222 West Huron St., Chicago, Ill.

PATENTS

HAVE YOUR patent work done by a specialist. I have had more than 25 years' experience in refrigeration engineering. Prompt searches and reports. Reasonable fees. H. R. VAN DEVENTER (ASRE), Patent Attorney, 342 Madison Avenue, New York City.



We Sell Only Thru

Distributors of refrigeration and insulation. Get particulars on our

HyDroLoc Individual Lockers

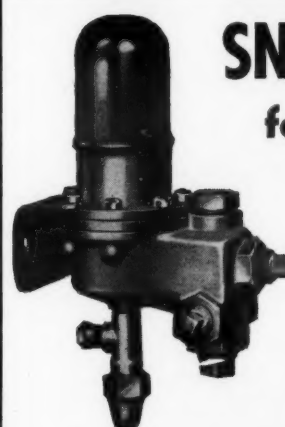
the locker that has popular demand. Master Refrigerated Locker Systems, Inc. 121 Main St. Sioux City, Iowa

149,500 Masterbuilt Lockers in Use

BUNDY TUBING

Copper-Braced Steel. Copper Coated Inside and Out. Sizes: ¼" to ¾" O.D.

BUNDY TUBING CO., DETROIT



SNAP-ACTION VALVE

for Multiple Temperature

by Aminco

A marvelous precision valve designed for systems with more than one coil, operated from the same compressor. Any variety of units such as ice cream cabinets, soda fountains, back bars, water coolers, candy counters, beer coils, storage rooms, etc., may be connected to a single compressor unit by the use of Aminco Snap Action Valve.

Adjustable from 20" of vacuum to 63 pounds pressure. Differential 7 lbs. min. to 29 lbs. max. May be used with any refrigerant except ammonia. For flooded as well as dry gas types or any combination of either. Free from bellows strain.

Send for Bulletin No. 17

AMERICAN INJECTOR COMPANY

1481 Fourteenth Avenue

DETROIT, MICHIGAN

Pacific Coast: Van D. Clothier, 1015 E. 16th, Los Angeles, Calif. Export: Borg-Warner International Corp., 310 S. Michigan Ave., Chicago, Ill.

The Simplest and most Versatile Control

THE NEW **POLARTRON**

FOR PRESSURE CONTROL UP TO 1 H.P.A.C.

MINNEAPOLIS-HONEYWELL

MINNEAPOLIS-HONEYWELL REGULATOR COMPANY REFRIGERATION Control

Chieftain

This is another Chieftain year. First quarter sales exceed any like period in our history.

We are grateful to our old customers and many new friends for this continued evidence of confidence.

TECUMSEH PRODUCTS CO., TECUMSEH, MICH.

Canadian distributor: Refrigeration Supplies Co., Ltd., London, Ontario

Nearly 40 years experience

The solution to drinking water problems is found in the Puro line... a complete line. Write for franchise information.

PURO

WATER

ELECTRIC WATER COOLERS

Puro Filter Corp. of America, 440 Lafayette St., New York.

LARKIN

WALL HUMI-TEMP UNITS

The Industry's Leading Forced Convection Unit

You can be assured of enthusiastic satisfaction and outspoken good will by always specifying Larkin Humi-Temp, praised by pleased users everywhere.

See your jobber today or write direct to

LARKIN COILS, INC.

519 Fair St., S.E., ATLANTA, GA.

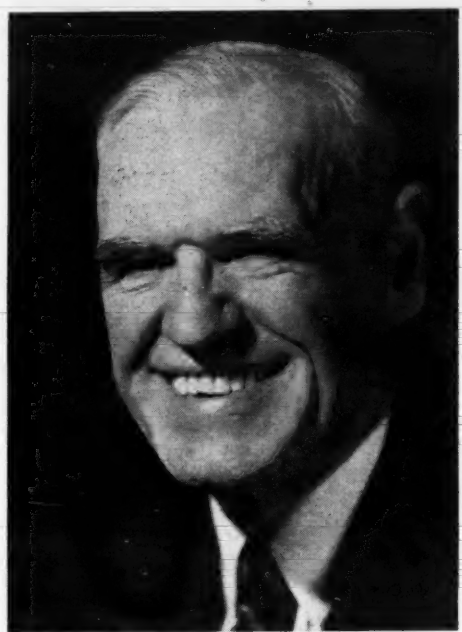
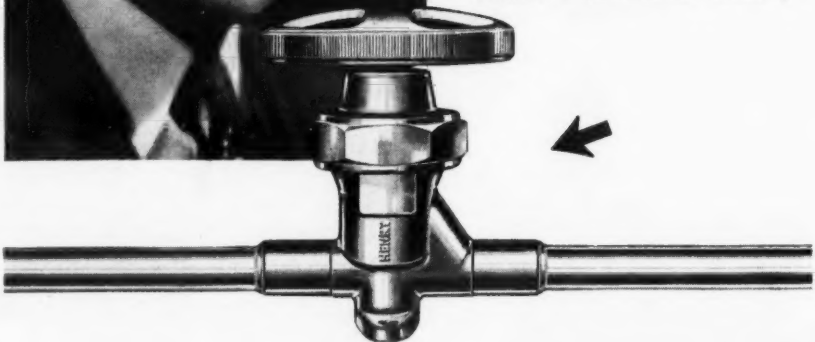
Originators of The Cross Fin Coil

You'll like these Features too!



CONTRACTOR "Ports-in-Line saves me money by eliminating needless tube bending and assuring quicker installation."

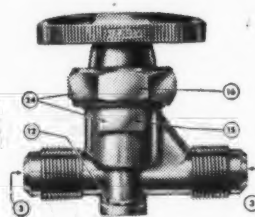
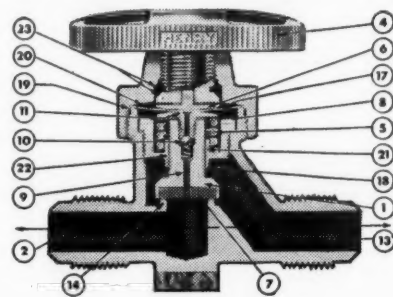
(It's a lot easier to install lines, especially with solder connections, without bending tubing at the valve. Ports-in-Line saves time and temper and makes installations neater.)



← **DESIGN ENGINEER**

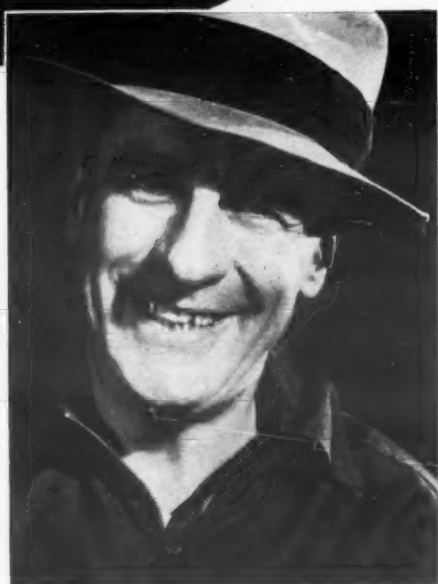
"We welcome new designs that make our products more saleable. This new Henry line really fills the bill."

(Henry Balanced-Action Diaphragm Packless Valves incorporate 24 design features—and eleven of these, including those associated with Balanced-Action, are new in the field, available now for the first time.)



Henry BALANCED-ACTION DIAPHRAGM PACKLESS Valves

Write for
BULLETIN 128



SERVICEMAN "I meet a lot of valve users, and they all seem to like Henry's oval handwheel."

(No wonder! Its natural grip makes valves easier to operate, by providing greater leverage. It's molded to fit your hand.)

THIS LIST OF FEATURES TELLS THE STORY

EXCLUSIVE FEATURES

- 1—Valve stem cannot "stick shut."
- 2—Valve is non-directional—inlet or outlet lines can be connected to either port.
- 3—Inlet and outlet ports in line—on two-way or three-way valves—tube bending eliminated. Neater lines. Easier to install.
- 4—OVALINE hand wheel. The only hand wheel with a natural gripping surface.
- 5—Light-weight, stainless steel spring, corrosion-proof. Naturally much less wear and strain on diaphragms. Easier valve operation.
- 6—Non-rotating, floating bearing plate. No torsional wear or strain on diaphragms.
- 7—Securely anchored, time-tested composition seat disc rolled on a taper into end of stem assures positive gas-tight "velvet" seal.
- 8—Four-point wrench grip for easy removal of spring cage.
- 9—Balancing channel.
- 10—Spring-tensioned ball check seals balancing channel for diaphragm inspection.
- 11—Positive metal-to-metal seal between balancing channel port and diaphragm when valve is in closed position.

NON-EXCLUSIVE FEATURES

- 12—Rigid mounting flange, integral with valve body forging.
- 13—Full capacity openings and oversize seat chamber provide unrestricted flow through valve.
- 14—Raised design reduces possibility of foreign matter accumulating on seat, assuring positive shut-off.
- 15—Wrench flats on valve body facilitate removal of bonnet and internal parts for inspection or line soldering.
- 16—Hexagonal wrench grip on valve bonnet.
- 17—Four laminated diaphragms of dissimilar metals. Puncture and fracture proof. Can be inspected with valve under pressure.
- 18—Valve stem seals on spring cage in full open position for diaphragm inspection.
- 19—Hermetic seal between bonnet, diaphragms and body.
- 20—Bonnet machined to provide support for diaphragms when valve is wide open.
- 21—Positive valve stem guide in spring cage.
- 22—Compressor pulsations minimized, thus increasing life of diaphragms.
- 23—Positive metal-to-metal seal with valve in full open position.
- 24—Forged brass body and bonnet.

You will want these features. Ask your Jobber. Accept no substitute.

HENRY VALVE COMPANY

1001-1019 NORTH SPAULDING AVENUE • CHICAGO, ILLINOIS

Dryers, Strainers and Valves for Refrigeration and Air Conditioning . . . Also Ammonia Valves and Forged Steel Fittings